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Static and Wind Tunnel Model Tests for the Development of Externally Blown Flap Noise Reduction Techniques

by A. P. Pennock, G. Swift, and J. A. Marbert

LOCKHEED-GEORGIA COMPANY

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Project Manager, N. E. Samanich, NASA Lewis Research Center, Cleveland, OH 44135

16. Abstract

Externally blown flap models were tested for noise and performance at one-fifth scale in a static facility and at one-tenth scale in a large acoustically-treated wind tunnel. The static tests covered two flap designs, conical and ejector nozzles, third-flap noise-reduction treatments, internal blowing, and flap/nozzle geometry variations. The wind tunnel variables were triple-slotted or single-slotted flaps, sweep angle, and solid or perforated third flap.

The static test program showed the following noise reductions at takeoff: 1.5 PNdB due to treating the third flap; 0.5 PNdB due to blowing from the third flap; 6 PNdB at flyover and 4.5 PNdB in the critical sideline plane (30° elevation) due to installation of the ejector nozzle. The wind tunnel program showed a reduction of 2 PNdB in the sideline plane due to a forward speed of 43.8 m/s (85 kn). The best combination of noise reduction concepts reduced the sideline noise of the reference aircraft at constant field length by 4 PNdB.

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1. SUMMARY

The objective of the program was to develop the technology and develop techniques to reduce jet/flap interaction noise.

Externally blown flap (EBF) configurations were tested at one-fifth scale in an outdoor static-test facility and at one-tenth scale in a large acoustically-treated wind tunnel. In the static facility, noise was measured by eleven microphones on a rotatable arch. Noise in the wind tunnel was measured by twelve microphones in a fixed array. Aero/propulsion forces were measured in both programs. The static models represented two triple-slotted flap designs, two conical nozzles, and a fluted mixer nozzle with removable ejector. Many third-flap trailing-edge modifications, primarily various types of porous and flexible edges, were tested. Blowing from the third flap (top, bottom, or trailing edge), fairings covering the flap slots, and variations in slot gap, trailing edge sweep angle, and nozzle position were tested extensively. The configuration variables in the wind tunnel test were flap setting, triple-slotted or single-slotted flaps, sweep angle, and the use of a solid or perforated third flap.

The static test program showed the following noise reductions at takeoff: 1.5 PNdB due to treating the third flap; 0.5 PNdB due to blowing from the third flap; 6 PNdB at flyover and 4.5 PNdB in the critical sideline plane (30° elevation) due to installation of the ejector nozzle. The wind tunnel program showed a reduction of 2 PNdB in the sideline plane due to a forward speed of 43.8 m/s (85 kn). The best combination of noise reduction concepts reduced the sideline noise of the reference aircraft at constant field length by 4 PNdB.

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2. INTRODUCTION

Aircraft noise is one of the more serious problems confronting the aviation industry. The recent DOT-NASA Civil Aviation Research and Development (CARD) Policy Study concluded that noise, along with airport congestion, will continue to be an extremely serious problem for the foreseeable future.

The requirements that must be met are still evolving. When the work reported herein was initiated, 95 EPNdB at a 152.4-m (500-ft) sideline was a typical STOL landing and takeoff criterion. A 2.59-sq-km (1-sq-mi) 90-EPNdB footprint limitation is now more common. Whatever the ultimate level or type of noise criterion, it will surely be considerably more stringent than the current FAR 36 for CTOL aircraft, which is of the order of 22 EPNdB higher than the 95-EPNdB/152.4-m criterion. Thus it is imperative that aero/acoustic technology be advanced to provide a better understanding of noise-generating mechanisms and their suppression.

STOL aircraft show promise of alleviating noise through the use of higher-angle takeoffs and approaches, less runway length, and quiet engines. The powered-lift systems associated with STOL aircraft, however, have unique noise characteristics. In addition to increased engine noise levels because of considerably increased thrust requirements, the powered-lift systems themselves create additional noise sources. The externally-blown flap (EBF) high-lift system, in which the flaps are deployed into the engine efflux, introduces jet/flap interaction noise not encountered on CTOL aircraft. The resulting noise level is higher than that created by the jet alone. Thus jet/flap interaction noise rather than jet noise alone becomes critical in determining the achievable noise floor.

If one accepts unsuppressed jet/flap interaction noise, STOL aircraft noise goals can be met only by employing large turbofan engines with very high bypass ratios and extremely low nozzle pressure ratios. While definitely feasible, these engines introduce aircraft performance, control, and weight penalties. The purpose of the present program, therefore, was to explore jet/flap designs and noise suppression techniques

which would permit the use of lower-bypass engines.

The program was conducted in five phases:

(1) Preliminary analysis of proposed noise-reduction concepts.

(2) Series 1 static model test program to identify concepts warranting further development.

(3) Series 2 static model test program. The intent of this program was to optimize the concepts previously selected. It was expanded to investigate the effects of changes in flap and nozzle configuration.

(4) Wind tunnel model test of forward speed effects.

(5) Evaluation of noise and performance results in terms of integrated effect on STOL aircraft noise.

The identification and description of noise-generating mechanisms and their characteristics was an important consideration throughout the program.

3. BACKGROUND

Description of the Problem

The objective of the program was to develop the technology and develop techniques to reduce jet/flap interaction noise. The specific goal was that the jet/flap interaction noise of the reference aircraft, described in section 11, Application to Aircraft, not exceed 92 PNdB during approach and takeoff at a 152.4-m (500-ft) sideline. Noise sources other than flap interaction, such as forward and aft radiated fan noise, turbine noise, combustion noise, other engine installation noises, and their prediction and control are not part of this study and are not considered further. Jet noise, however, is influenced by the presence of the wing and flaps and is therefore an integral part of the study.

Previous experimental and theoretical studies of this type of aircraft (ref. 1) have indicated that jet/flap interaction noise on a 152.4-m sideline is usually more critical during takeoff than during approach and that the maximum level is expected when the elevation from the sideline is about 0.524 rad (30°). This results from a tradeoff of noise source directivity, source-to-observer distance, fuselage shielding, and extra ground attenuation. Thus noise control emphasis should center on the jet/flap interaction noise characteristics at this point in the flight profile.

Figure 3-1 shows the flap/jet interaction noise characteristics predicted at the start of the program and compares them to the 92 PNdB goal. A jet/flap interaction noise level of 106 PNdB was predicted at takeoff. The curves represent the fully-corrected aircraft in flight; i.e., they include the effects of ground reflection and absorption, hot jet, fuselage shielding, and forward speed. These corrections, listed on pages 11-2 and 11-3, reduce the noise level that would be predicted at static cold flow test conditions by approximately 4 PNdB.

Figure 3-2(a) compares the predicted spectrum to a constant-noy 92 PNdB spectrum. The latter is the ideal way to achieve the noise goal, in the sense that a constant-noy spectrum requires the least reduction in OASPL.

Its significance is that it identifies those portions of the spectrum where noise reduction is most important in terms of PNdB. In figure 3-2(b), the humps at 200 and 2000 Hz indicate that these frequencies are the most offensive portions of the unsuppressed 106-PNdB spectrum and thus should receive the most attention. Reduction of a noise level by suppressing a non-dominant noise source has extremely limited effectiveness.

Thus it appeared that a reduction of some 14 PNdB, with a minimum penalty design, was required to obtain the jet/flap interaction noise goal of 92 PNdB for the reference aircraft. Achievement of this noise reduction goal requires broad-band noise reduction over the frequency range of 50 to 10,000 Hz, with a maximum reduction of about 16 dB at 100 to 500 Hz. This is equivalent to a 99% reduction of acoustic power, which, before the reduction, is only 0.1-0.01% of the mechanical power of the jet. Noise suppression of these dimensions is a formidable task, especially since the flap system is exposed and cannot be muffled by introducing shielding or attenuation between the source and the observer. The noise must be controlled at the source, which dramatically increases the difficulty of the problem. To efficiently accomplish noise reduction at the source requires that the location of the source be known, that the physical phenomena creating the noise be understood, and that the critical noise-producing parameters be identified. The task is far more challenging than, for example, that of reducing fan or turbine noise on a gas turbine engine installation using currently available techniques.

Noise Sources

The noise of an EBF system may be described as that generated by the interaction between a subsonic turbulent flow and finite rigid surfaces. It is thus dependent upon the flow characteristics and the geometry of the surfaces. Many theoretical studies and experimental investigations, reported in the literature, attempt to identify the relevant sources. The general problem is treated by Curle, reference 2, and others.

Figure 3-3 depicts the flow field around a nozzle/wing/flap, with the associated noise sources. Mixing with the freestream as it goes, the jet

leaves the nozzle, impinges on the flaps, is turned and partially diverted through the slots, convects over the flap surfaces and leading and trailing edges, and leaves the last trailing edge from the upper and lower surfaces to become a free jet again. Its shape changes from a circular cross-section to a thin wide sheet with some spanwise flow, which is reduced by forward speed. The peak velocity experiences little decay from its value at the nozzle exit but the presence of the flaps causes a significant increase in the turbulence level of the flow. The noise generation model of the jet/flap interaction process is shown schematically in figure 3-4.

The totality of the sources shown in figure 3-3 is referred to herein as jet/flap interaction noise - the noise produced by the jet and by its interaction with the flaps. A subset of the sources, comprising slot trailing edge noise, slot jet noise, and flap upper surface scrubbing noise, is termed slot exit flap interaction noise. It is convenient to distinguish this source from others because of its aft directionality and different response to forward speed, as discussed in section 9, Wind Tunnel Acoustic Results.

Estimates and rankings of the various sources have been attempted by Hayden (ref. 3). He concludes that for a triple-slotted flap design similar to the baseline used herein, at takeoff flap setting, trailing-edge noise on all three flaps is the dominant source, flap whole-body noise is a secondary source, and little data are available to rank leading-edge noise. Fink (ref. 4) concludes that leading-edge noise is not a significant EBF noise source. He deduces this from velocity exponents and spectrum shapes. Dimensional arguments lead him to conclude that scrubbing noise and trailing-edge noise are the dominant sources. He also speculates as to the presence of an additional unidentified aero-acoustic source. Sophisticated acoustical analyses by Ffowcs Williams and Hall (ref. 5) evaluate the acoustic characteristics of an edge in a turbulent subsonic flow. They conclude that this could be a significant noise source. Potter (ref. 6) considered that the primary source of noise for a single small airfoil in a turbulent subsonic flow was the trailing edge, and went on to test trailing edge configurations which might reduce the noise. Numerous other studies of the

acoustic radiation characteristics of single airfoils immersed in subsonic turbulent flow have been made.

Evaluation of these analyses and references led to the conclusion that the dominant noise source was the third (last) trailing edge and that the other trailing edges, leading edges and slots, whole-body effects, as well as the distorted and deflected jet, also contributed to the overall noise level but in a secondary manner. Consequently, the emphasis in the program was placed on reducing third-flap trailing-edge noise.

Jet/Flap Interaction Noise Control

At the inception of the program few attempts had been made to control the noise generated by the interaction of a turbulent subsonic flow with edges, discrete airfoils, and wing-and-triple-slotted-flap arrangements other than by reducing mean flow velocity. The range of possible noise-suppression approaches includes:

- Reducing noise generated at the source, by decreasing the efficiency with which the mechanical power of the stream is converted to acoustic power.
- Changing the noise spectrum to shift acoustic output to less annoying frequencies.
- Changing the acoustic directivity pattern to direct the noise away from ground observers.
- Absorbing or scattering the noise energy after its generation.

The noise-reduction concept areas described below emerged as having the best potential for development to practical application on EBF aircraft.

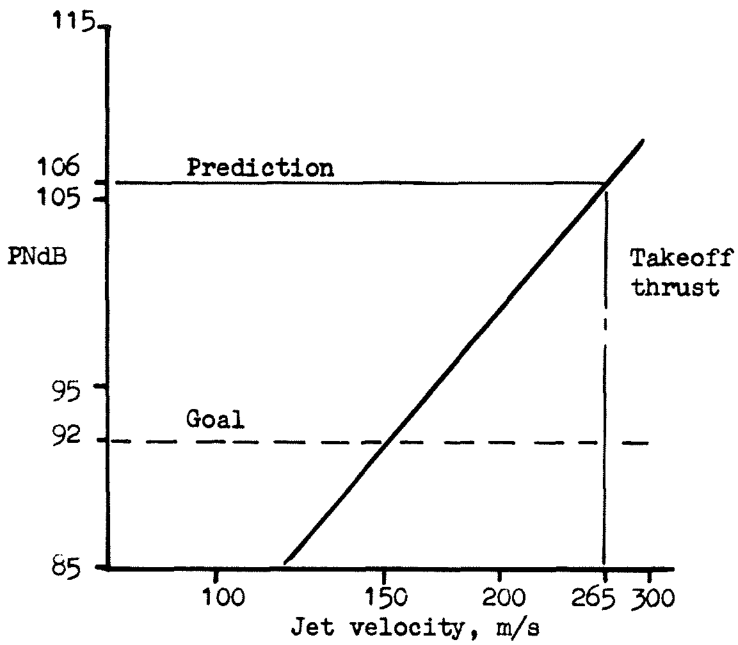
Jet modification.- Jet characteristics are determined by the nozzle configuration (conical, mixer, or ejector/mixer), nozzle size, and engine cycle (nozzle pressure ratio). These features, together with the wing and flap geometry, determine the mass flow rate, velocity, target point, and the turbulence level and scale.

Wing and flap geometry.- Geometric variations are of two types. The

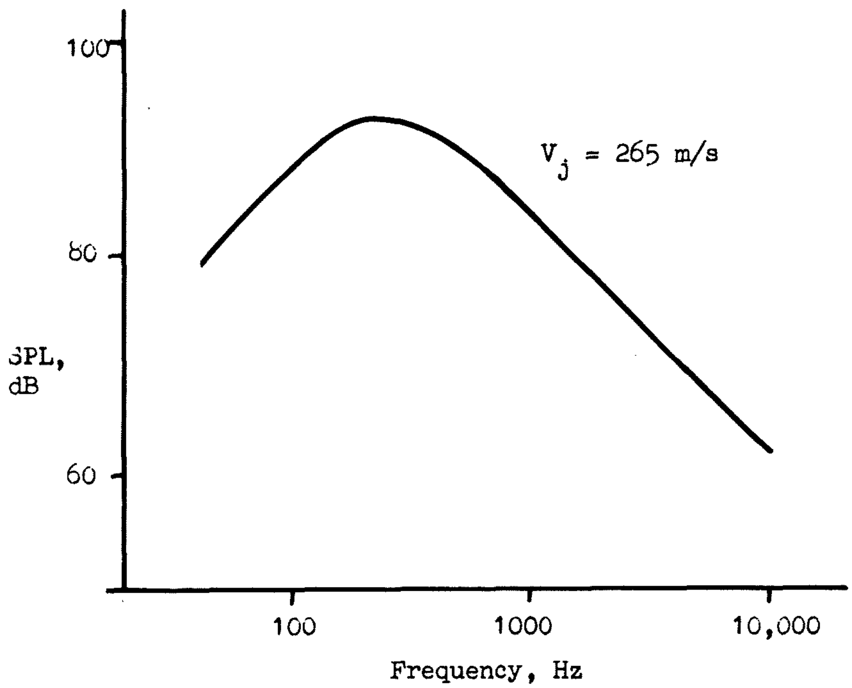
first concerns the gross physical features of the nozzle, wing, and flaps, including nozzle/wing/flap axial and vertical spacing, nozzle pitch into the flaps, and flap sweep, wetted area, and deflection angles. The second concerns the detailed design of the flaps: triple-, double-, or single-slotted, cross-sectional shape, and spacing.

Flap modifications.- Modifications to flap edges and scrubbed surfaces can change the acoustic transduction process and reduce the acoustic radiation efficiency or the aerodynamic inefficiency. The modifications may be passive or active. Passive modifications include the incorporation of trailing edge serrations, compliant materials, and porous materials. Active modifications involve secondary blowing from the flap, which can stabilize the turbulent boundary layer shed from the trailing edge and reduce unsteady wake formation.

The static test program was designed to explore the concepts identified above. The wind tunnel test program investigated the effect of forward speed on jet/flap interaction noise.

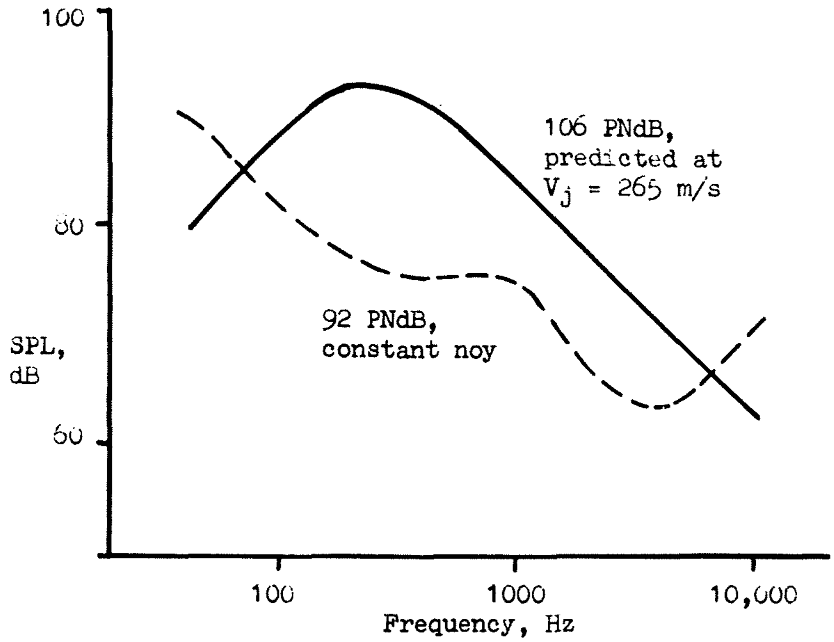


(a) Noise-velocity characteristic.

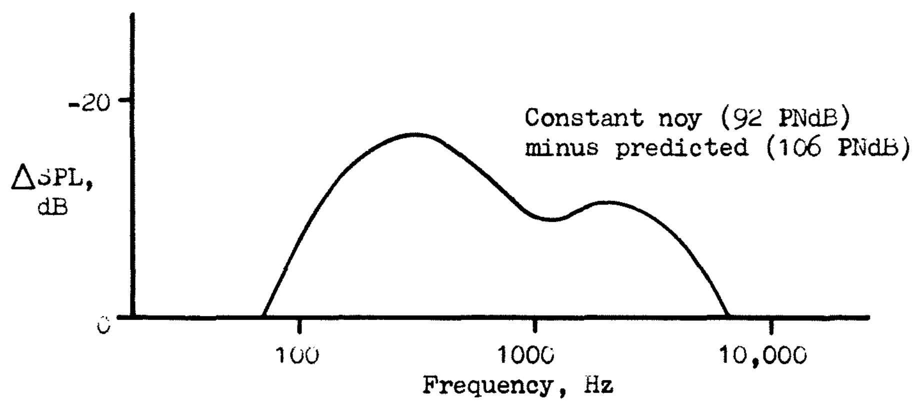


(b) One-third-octave-band spectrum.

Figure 3-1.- Predicted jet/flap interaction noise characteristics. Reference aircraft, 0.524 rad (30°) elevation, fully corrected.



(a) Comparison of one-third-octave-band spectra.



(b) Difference between one-third-octave-band spectra.

Figure 3-2.- Achieving 92 PNdB flap/jet interaction noise at constant noy. Reference aircraft, 0.524 rad (30°) elevation, fully corrected.

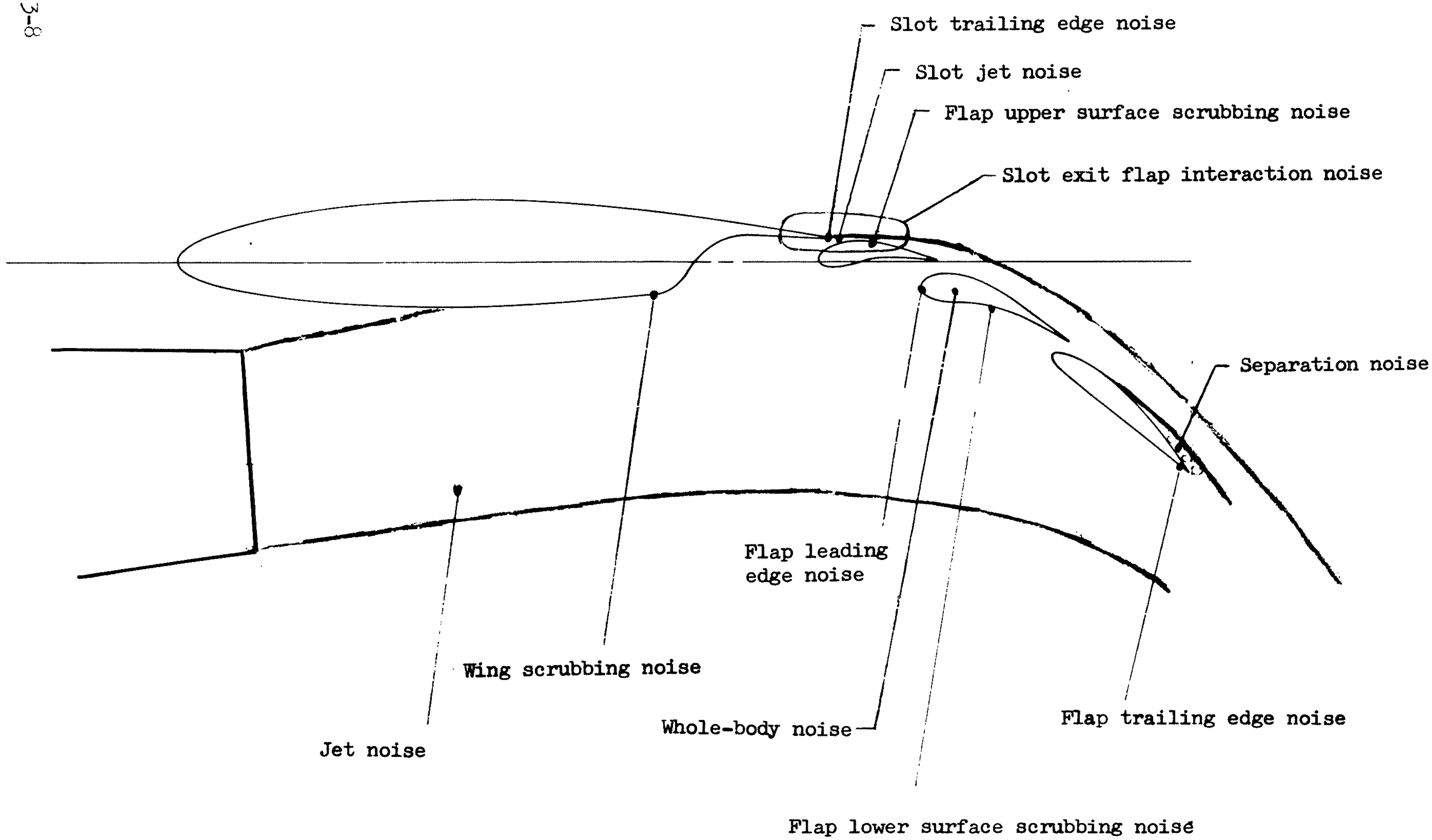


Figure 3-3.- Jet/flap interaction noise sources.

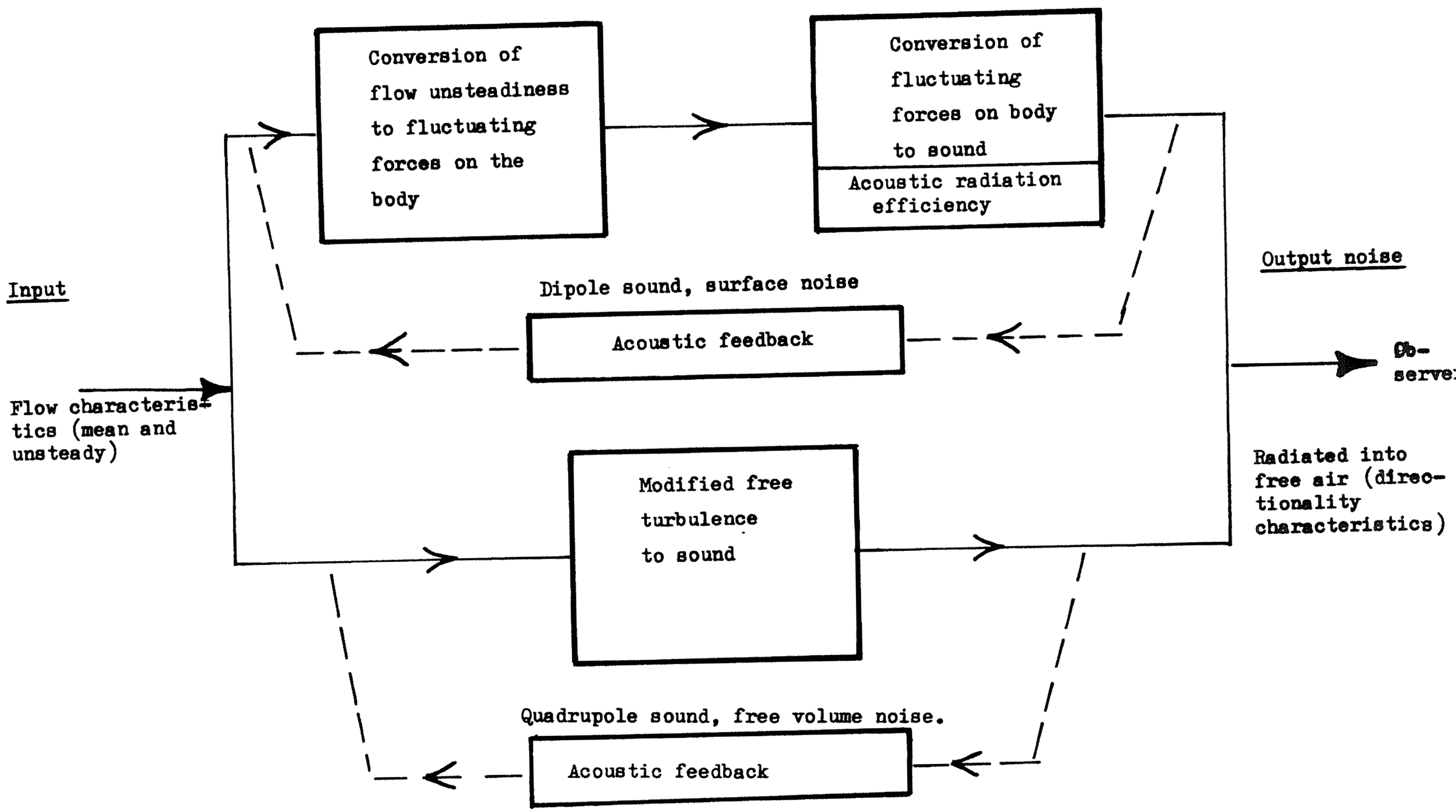


Figure 3-4.-Jet flap interaction noise generation model.

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4. STATIC TEST DESCRIPTION

Facility

The static test facility, pictured in figure 4-1, consisted of the model test rig, centered on a 15.2-m (50-ft) diameter concrete pad, and a control center some 50 m away. The major elements of the facility are shown schematically in figure 4-2 and included:

- The air supply system.
- The model support system.
- The microphone arch.
- The data acquisition system.

Continuous airflow from remote compressors was supplied to the site through a 15.2-cm (6-in) diameter delivery pipe at rates up to 8.16 kg/s (18 lb/s) at 516,000 N/m^2 (75 psig) and ambient temperature. The supply line branches into 15.2-cm and 10.2-cm (4-in) diameter air lines with flow control valves that regulate flow to the nozzle and trailing edge slot. The nozzle supply system consisted of a support trapeze, conical diffuser, two mufflers, and transition duct. The nozzle and mufflers were isolated from the rigid supply lines by a rubber duct section and were supported by flexures so that nozzle thrust and side load could be measured by load cells. The 10.2-cm flap-supply line was similarly configured, less the trapeze, and used flex hoses between the line manifold and the flap to minimize contamination of the lift measurements.

The wing/flap model was mounted vertically to eliminate underwing impingement of the turned jet on the concrete pad. Load cells in the support structure provided data for the determination of wing/flap lift, drag, and side loads.

Eleven microphones were mounted on a 6.1-m (20-ft) radius on the semicircular powered arch, which could be positioned at any elevation angle from underwing (flyover) to overwing.

The control center, building L-7, overlooks the lighted test site, figure 4-3, and houses the data acquisition and reduction and airflow control systems.

Instrumentation and Data Handling

Aero/propulsion instrumentation.- The airflow measurement system in both the 15.2-cm and 10.2-cm supply lines used a sharp-edge orifice plate with pressure transducers to measure differential pressure. Orifice airflow temperature was measured with a nickel resistance grid.

Primary nozzle pressure ratios were obtained by manifolding the output of four total pressure probes and four static pressure probes located just upstream of the nozzle. One chromel-alumel thermocouple was mounted in the area to provide temperature data. Two total pressure probes were installed in the 10.2-cm line at the third flap to establish trailing edge pressure ratio. A total pressure probe was held at the blowing-slot exit during system check-out to relate the readings of the two probes to the exit total pressure. Trailing edge air temperature was measured upstream of the flex lines.

Nozzle forces in the axial and vertical (relative to the wing) directions were measured with two Toroid model 36-233 load cells installed, respectively, at the first bend along the air supply centerline and in the horizontal plane just upstream of the nozzle attachment flange. Six Toroid loadcells measured wing/flap drag (two cells),llift (three cells), and sideload (one cell).

A 73-tube total pressure rake was installed, when desired, at the model trailing edge to measure wake profiles normal to the surface. The pressures were routed through two 48-port scanivalves to two Statham PM131 pressure transducers.

All instrumentation signals were cabled to the control center for recording, monitoring, or test control. In addition, ambient pressure and temperature were hand-recorded for manual entry into the data reduction program.

All transducers were laboratory-calibrated prior to the test program and calibration checks were performed after installation. Tares for the nozzle and wing/flap system were established prior to each test series.

Aero/propulsion data acquisition and reduction.- A block diagram of the data system is shown in figure 4-4. The upper portion of the figure shows the elements relating to receiving and recording aero/propulsion data. The aero/propulsion data were recorded over a 5-second period during the 30 seconds of stabilized operation established for recording the acoustic data. The analog signals from the aero/propulsion transducers were conditioned and then transformed into a serialized digital pulse train by the pulse code modulation (PCM) system, EMR 371-S1. The pulse train was recorded on one channel of the Honeywell 7600 analog magnetic tape recorder.

The equipment shown on the right side of figure 4-4 and in figure 4-5 was used for quick-look data reduction. The multiplexed signal from the PCM system feeds a demodulating/digitizing system which can present any one of ten selected aero/propulsion parameters on a digital display unit in engineering units in real time. The ten parameters were also processed by a data coupler which formatted the data and sent it to a digital printer, a digital tape recorder, and a paper-tape punch. The printer provided an on-line look at the measured data, the digital tape was a back-up to the PCM data on the analog tape, and the paper tape was used as an input to the adjacent computer terminal, which provided final performance data on-line if desired.

The analog and digital magnetic tapes were processed daily in the Engineering Test Data Processing Center, as is shown schematically in figure 4-6. In this process the PCM data from the aero/propulsion transducers were averaged and reformatted for use in the Data Processing Center computer. Standardized tabular listings were prepared, and the data were stored on digital magnetic tape for machine-plotting or further analysis as desired.

Acoustic instrumentation.- The noise signals were acquired by eleven microphones mounted on the powered arch shown in figure 4-7. Bruel & Kjaer model 4136 6.35-mm (0.25-in) condenser microphones were used, with protective grids connected to B&K model 2615 preamplifiers. This combination has a useful frequency range of 250 to 50,000 Hz, which is

compatible with the one-fifth-scale static model. Line driver amplifiers with a flat frequency response of ± 0.5 dB through 80,000 Hz were used to power the 60-m long cables to the data acquisition equipment.

Foam windscreens, B&K model UA0237, were placed on the microphones to minimize wind excitation of the diaphragms. Microphone vibration was reduced by lining the microphone ring clamp with foam and wrapping the phenolic support with damping tape.

Fluctuating pressure measurements at the flap surface were measured with Kulite model LQ-30-125-10F pressure transducers. The transducers were glued to the flap surface as shown in figure 4-8. The transducer locations are shown in figure 7-13, which shows wing/flap/nozzle sections drawn to scale. Approximate locating dimensions for the transducers can be scaled from the figure.

Prior to each test series a spectral calibration was performed individually on the following groups of equipment in the acoustic data system: microphone and preamplifier; line driver and cable; amplifier; recorder; and analyzer. A constant-level input was applied at each one-third-octave-band center frequency from 100 through 50,000 Hz, and the calibration of each band relative to the reference frequency of 1000 Hz was established. Prior to each day's testing a Photocon model PC-125 acoustic calibrator was used to apply a known noise level at the reference frequency of 1000 Hz to each microphone. The dB increment obtained at 1000 Hz was applied at all frequency bands. The Kulite pressure transducers were calibrated by applying a static pressure differential on the transducer in a vacuum chamber. The static pressure differential was converted to the equivalent dB value, which, combined with its associated transducer voltage output, provided the required calibration value.

Acoustic data acquisition and reduction.- The acoustic data acquisition and quick-look data reduction systems are shown in the lower half of figure 4-4. The quick-look system is also shown in figure 4-9. Using the paper tape as input, it provided the on-line capability to obtain PNL, OASPL, and the one-third-octave-band SPL's. Quick-look data for a selected microphone were checked regularly during the testing.

The system used for final data reduction, outlined in figure 4-10, uses the digital tape in combination with punched cards as the input. Calibrations and standard-day corrections were applied first to generate model-scale one-third-octave-band SPL and OASPL for each microphone. Each model-scale level was then projected back to the source, scaled to the full-scale four-engine configuration, and projected to a 152.4-m (500-ft) sideline (or flyover) distance and to a 152.4-m radius, using standard-day attenuation factors. The standard outputs (see fig. 4-10) list the following information for each microphone: (1) model-scale one-third-octave-band SPL and OASPL, (2) full-scale 152.4-m sideline or flyover one-third-octave-band SPL, OASPL, PNL, TCF, and PNLT, (3) full-scale 152.4-m radial one-third-octave-band SPL, OASPL, PNL, TCF, and PNLT, and (4) noy values for the sideline/flyover spectra. Machine-plotted spectra and directivity plots were available on request. The full-scale noise levels result from geometric considerations only and do not include forward speed effects, shielding, and other corrections necessary to simulate the full-scale aircraft.

Kulite surface pressure data were reduced by the same process, with model-scale data being projected to the flap surface.

Models

The static tests were conducted on one-fifth-scale two-dimensional wing/flap models, in two test series. Noise-reduction concepts that appeared promising on the basis of literature search and analysis were screened in series 1. Those found best were further optimized in series 2.

The noise-reduction concepts tested in series 1 were variations of the flap and nozzle configuration defined in figures 4-11 and 4-12, designated baseline A. Limited tests of baseline A were also conducted in series 2. Other testing, however, indicated that lower noise and better aerodynamic performance could be achieved with a different flap and nozzle design. A second baseline, baseline B, shown in figures 4-13 and 4-14, was therefore used as the starting point for much of the testing in series 2. The airfoil sections of the two baselines are defined in appendix B.

In addition to the flap contour, nozzle position, and flap deflection differences seen in the figures, the baselines differ in the following respects:

	Baseline A	Baseline B
Nozzle diameter, model scale	17.67 cm (6.95 in)	20.20 cm (7.95 in)
Trailing edge sweep angle	0.281 rad (16.1°)	0
Third-flap gap	Standard flap gap (SFG)	Reduced flap gap (RFG)

The nozzle diameter and sweep changes were introduced to bring Baseline B closer to recent NASA aircraft study configurations. The reduction in the width of the slot, or gap, between the second and third flaps resulted from series 1 tests that showed the narrower gap to be beneficial. The third-flap gap variations tested are listed below in percent of wing chord:

	Baseline A	Baseline B
Reduced flap gap (RFG)	0.75%	1.2% (B/L)
Standard flap gap (SFG)	1.5% (B/L)	2.4%
Enlarged flap gap (EFG)	3.0%	-

In addition to the baselines and third-flap gap variations discussed above, the following configuration variables were tested:

- Third-flap trailing edge treatment and surface treatment
- Fairing over one or more flap slots
- Internal blowing from trailing edge or from near trailing edge of third flap
- Trailing edge sweep angle
- Interchange of conical nozzles between baselines
- Fluted mixer nozzle with several ejector variations
- Nozzle position relative to wing/flap
- Removal of one or more flaps

Table 6-III lists in chronological order all of the configurations tested. Figure 4-15 through 4-20 show, to scale, the location of the nozzle with respect to the wing and flaps for the mixer nozzle tests and the tests with conical nozzles in off-baseline positions.

Figures 4-21 through 4-29 are photographs of the third-flap treatments. Details of materials and construction are given in figure 4-30 and table 4-I. The flow-resistances of the feltmetal trailing edges (fig. 4-28), given in rayls, are the manufacturer's nominal values for steady-state flow.

Figure 4-31 shows baseline A with the air supply lines to the third flap for internal blowing tests. The following slot positions and widths were tested:

Position	Width, model scale
Trailing edge	0.064 cm (0.025 in)
	0.127 cm (0.050 in)
	0.254 cm (0.100 in)
Upper surface, 2.5 cm (1.0 in) from trailing edge	0.152 cm (0.060 in)
Lower surface, 2.5 cm (1.0 in) from trailing edge	0.152 cm (0.060 in)

The width of the trailing edge slot was adjusted by a series of screws that deflected flexible sheets which formed the upper and lower trailing edge surfaces. A trailing edge assembly with a flush slot exit was installed for upper or lower surface blowing. The assembly was symmetrical so that the slot could be located on either surface.

The mixer nozzle, which had 24 lobes, and treated ejector are shown in figures 4-32 through 4-34. The cylindrical mixing section of the ejector was cantilevered from the inlet lip, which was attached to the centerbody by three struts. The hardwall ejector had a sheet aluminum mixing section. In the treated ejector the mixing section was formed of 30-rayl feltmetal. It was covered with a 1.3-cm (0.5-in) layer of flexible open-cell foam which in turn was covered with a thin brass sheet.

One of the fairings used to cover the flap slots is shown in figure 4-35. Segmented fairings covering individual slots were also used. All fairings were taped in place with aluminum tape.

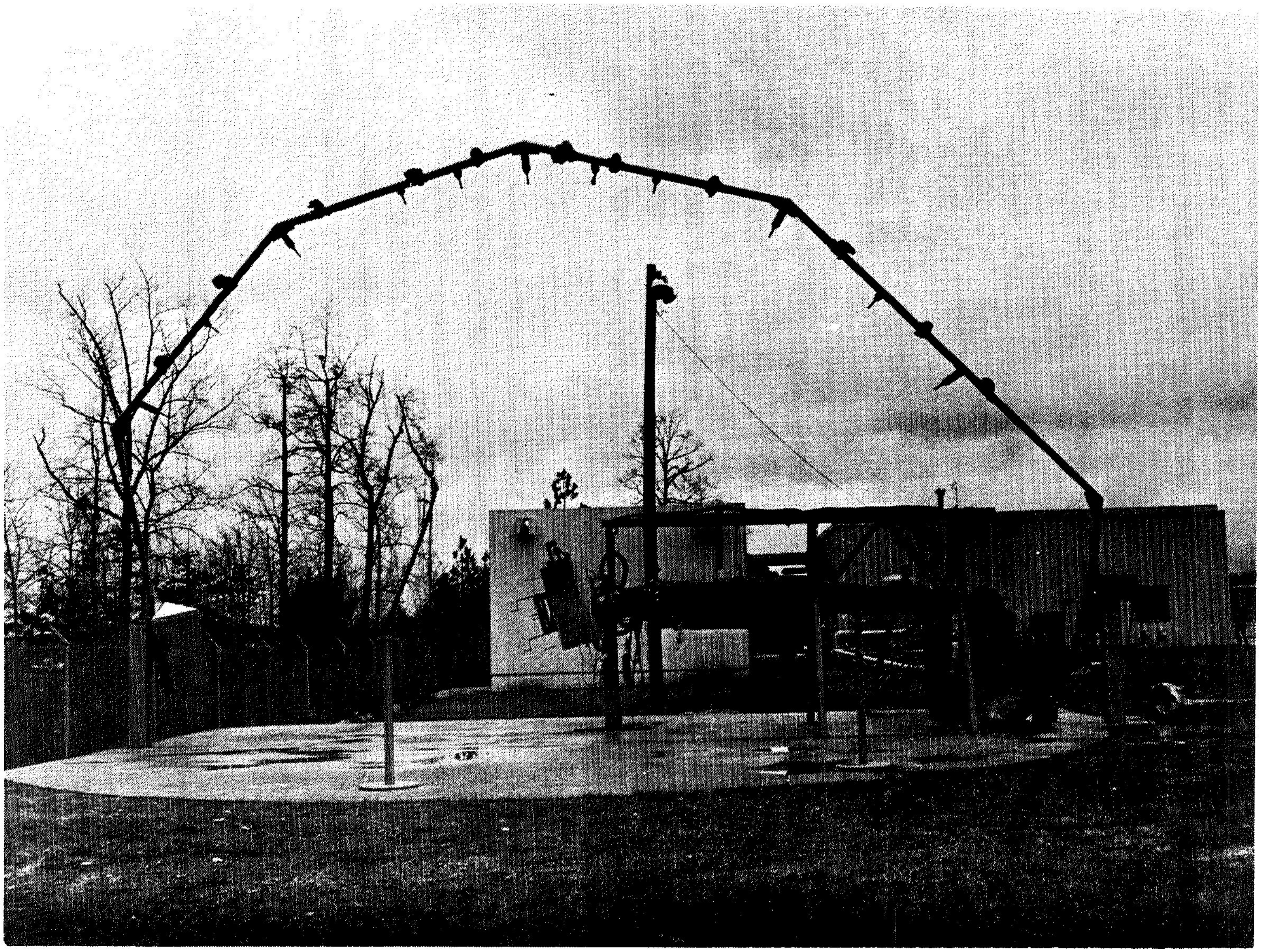

Figure 4-1.- Static aero/acoustic test facility.

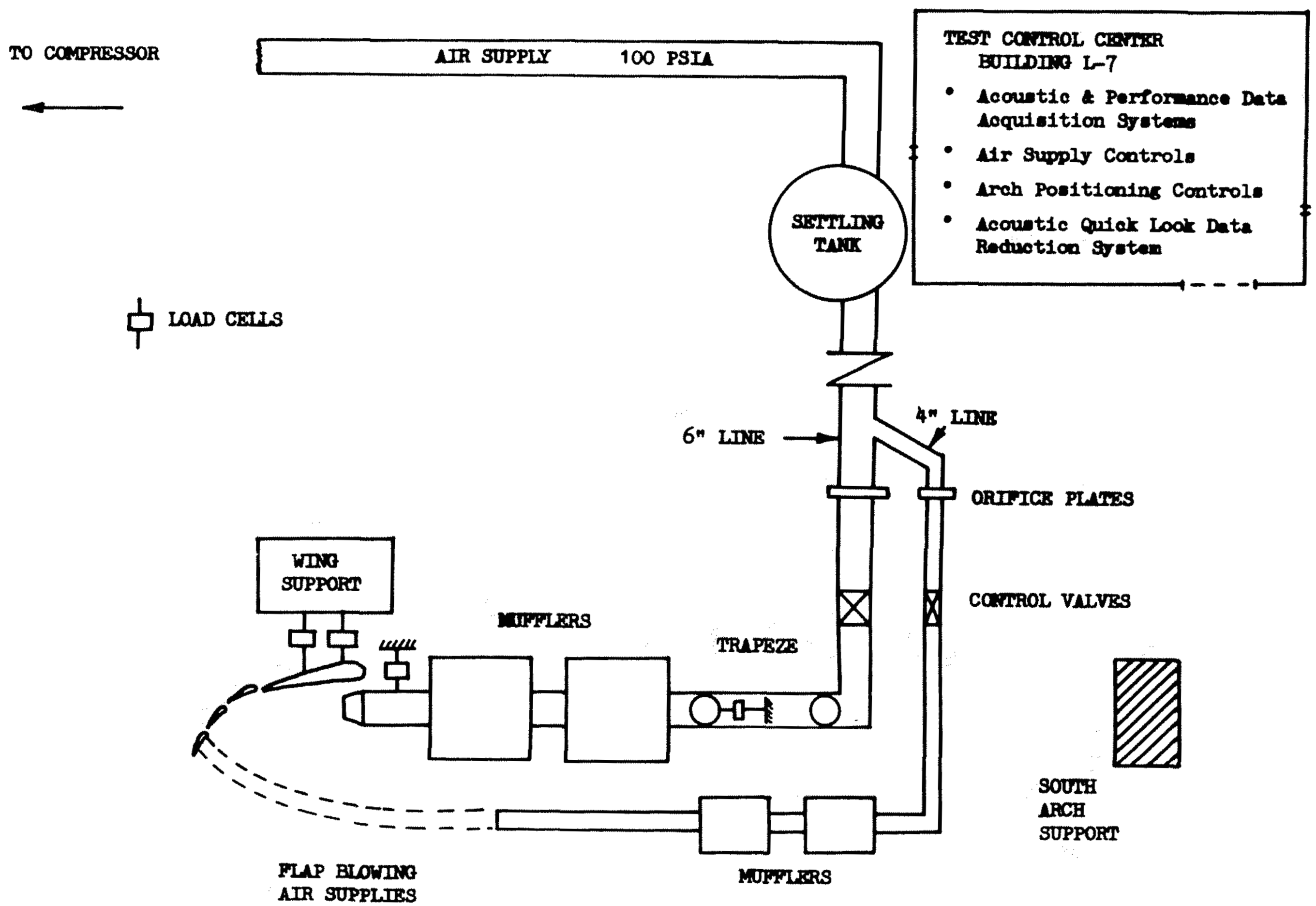

Figure 4-2.- Schematic diagram of test facility.

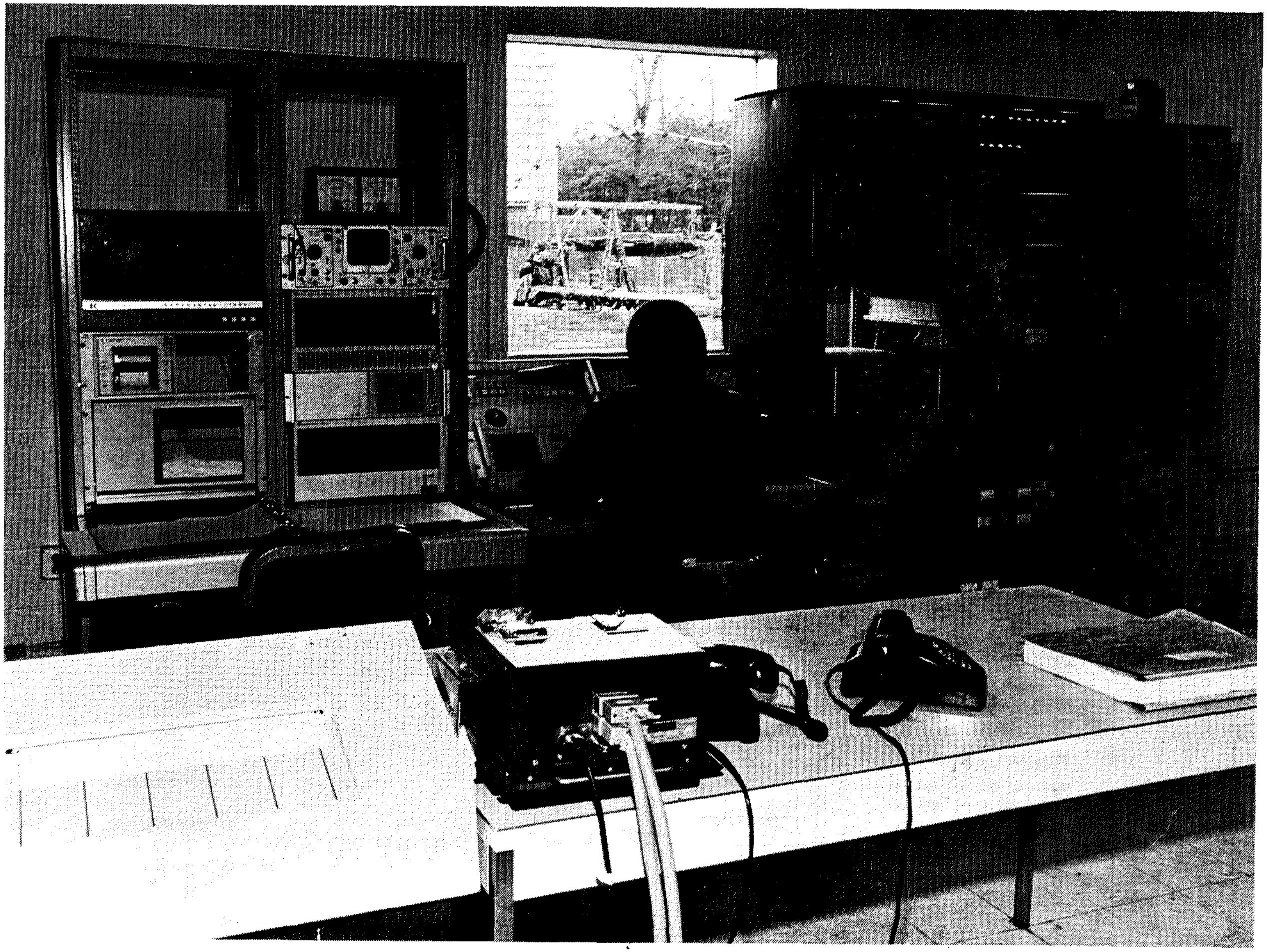

Figure 4-3.- Control center for static test facility, building L-7.

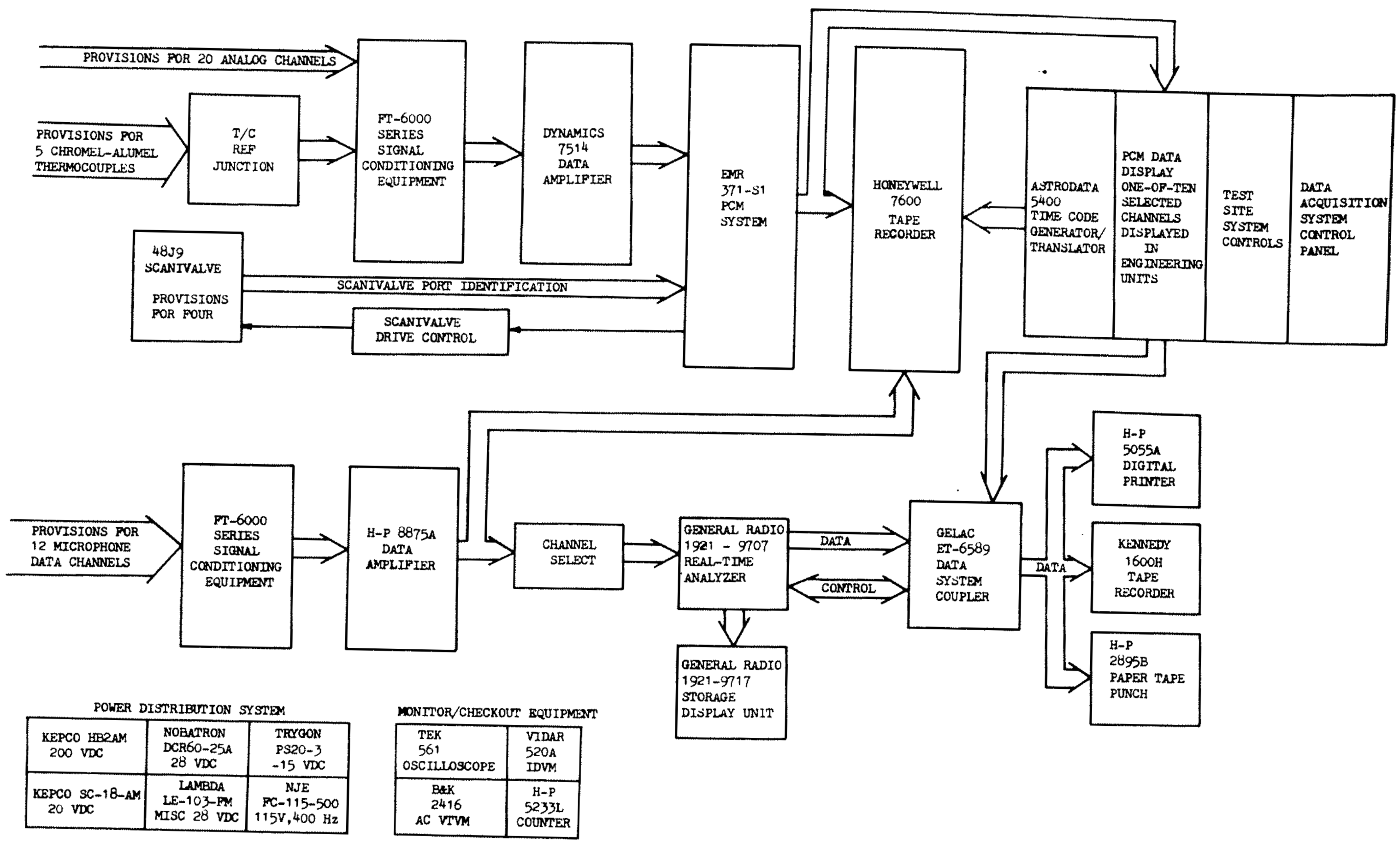

Figure 4-4.- Acoustic and performance data acquisition system block diagram.

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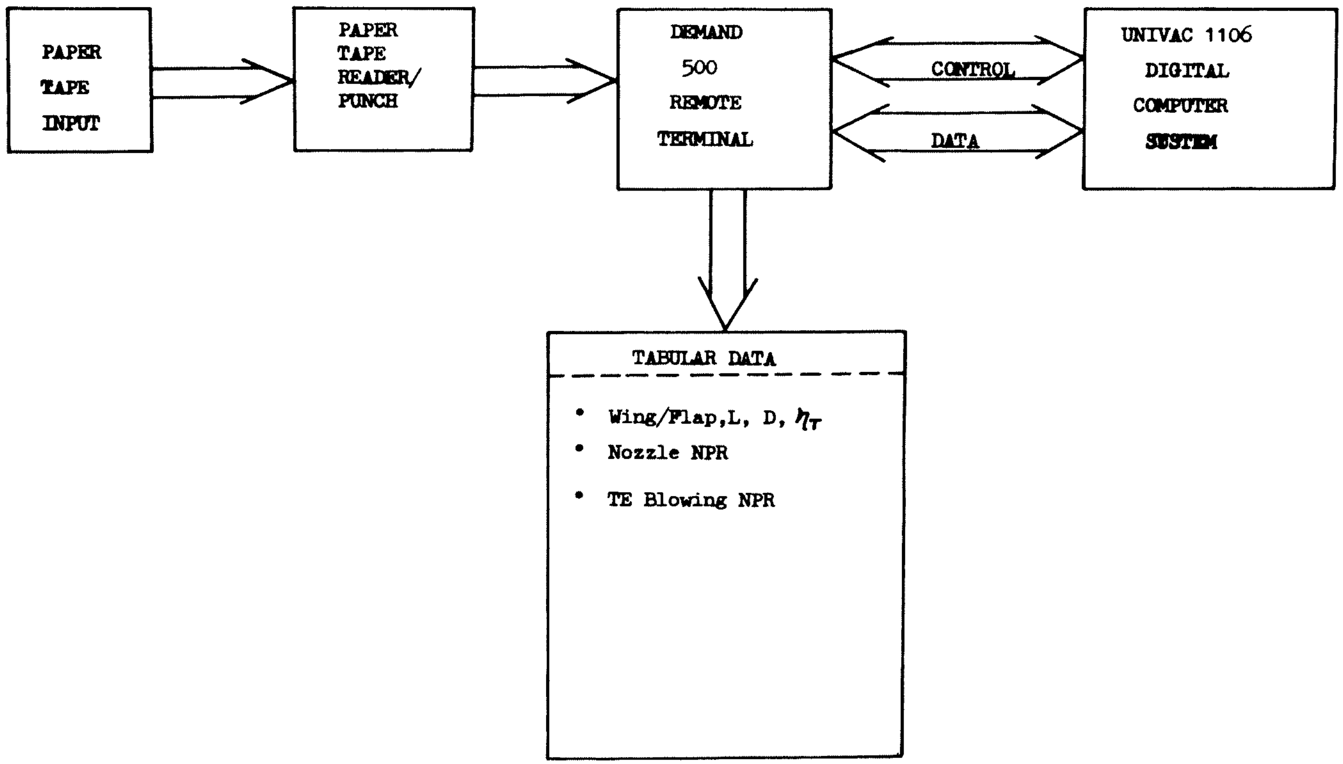


Figure 4-5.- Aero/propulsion performance quick-look data reduction system.

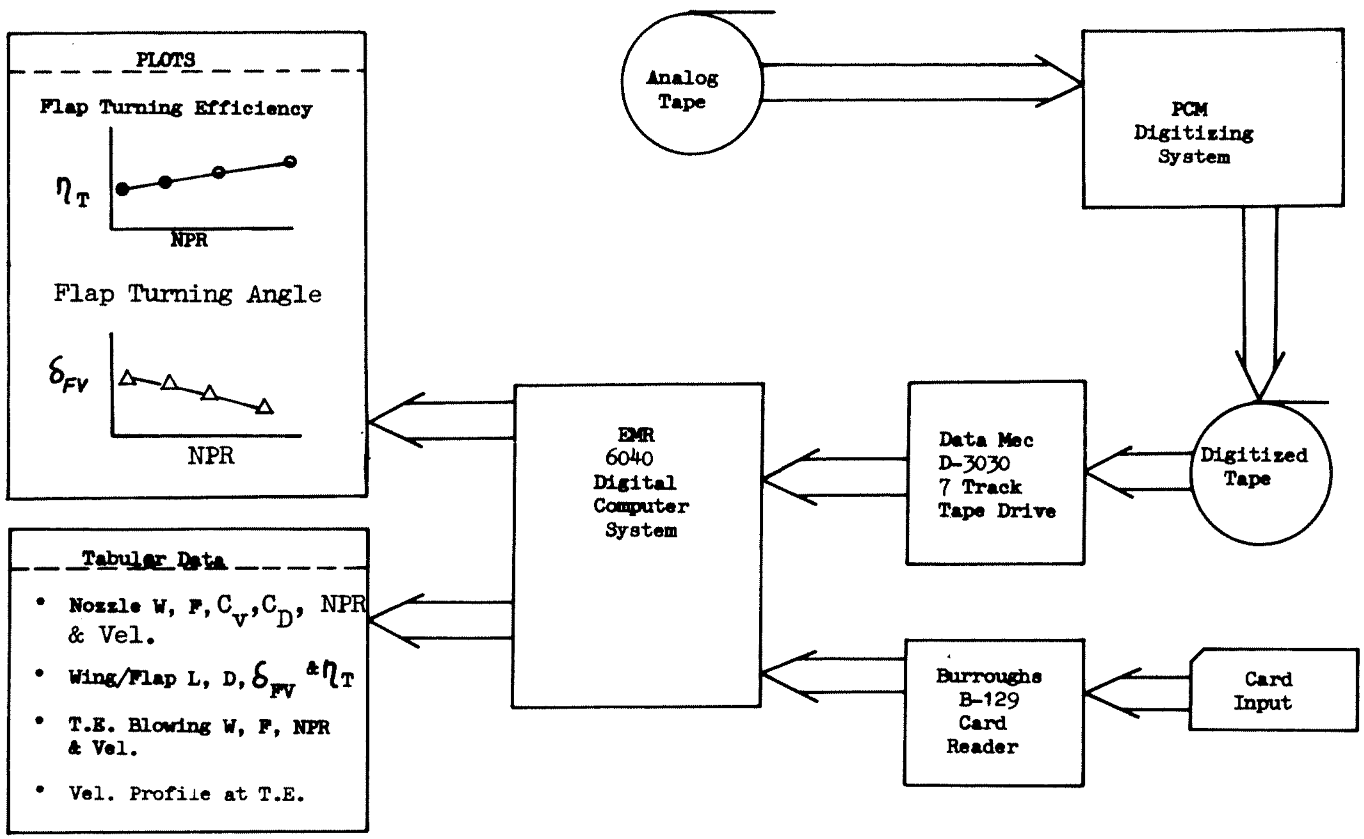


Figure 4-6.- Aero/propulsion performance data reduction system.

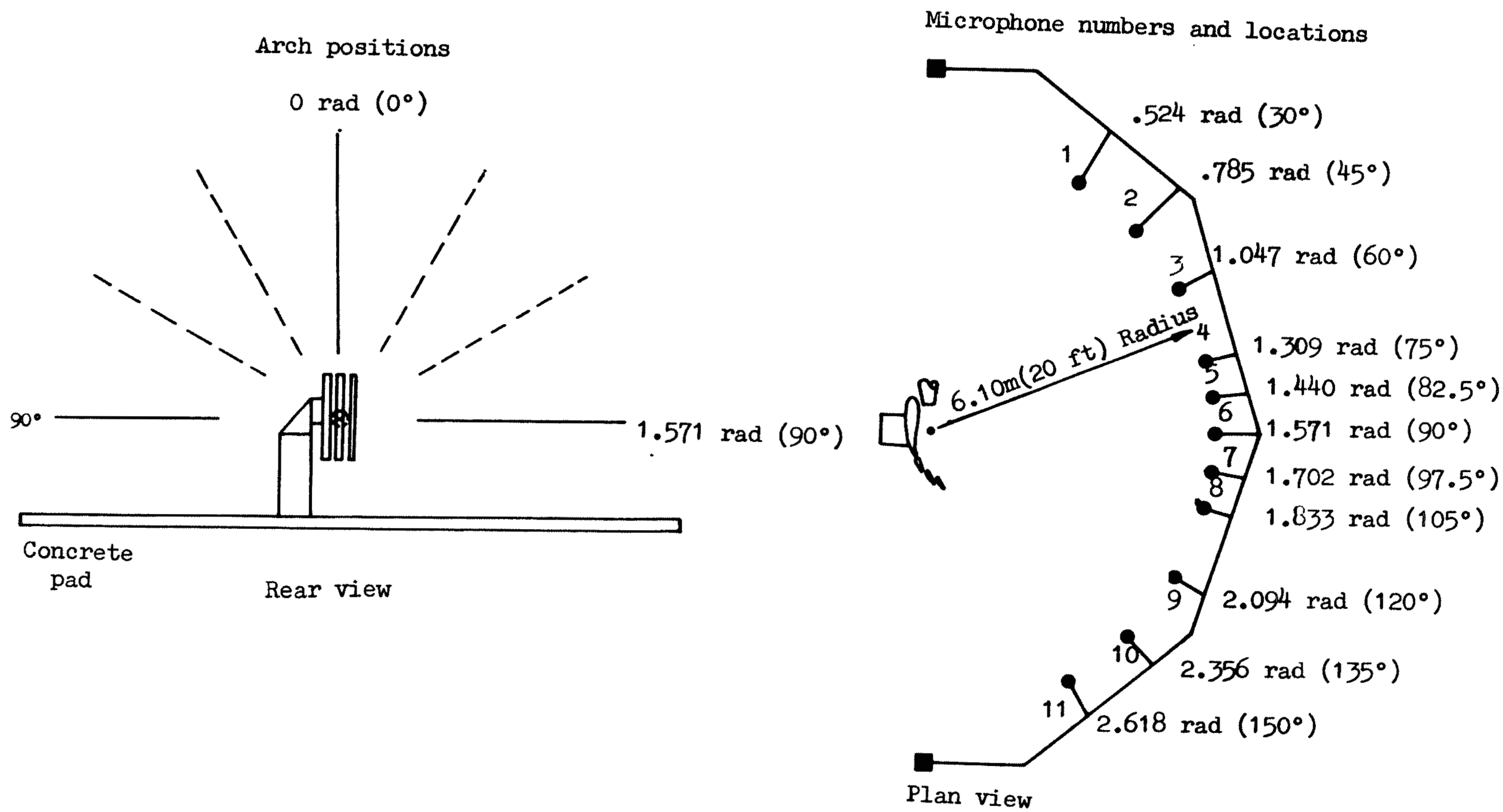


Figure 4-7.- Microphone arch schematic and measurement positions.

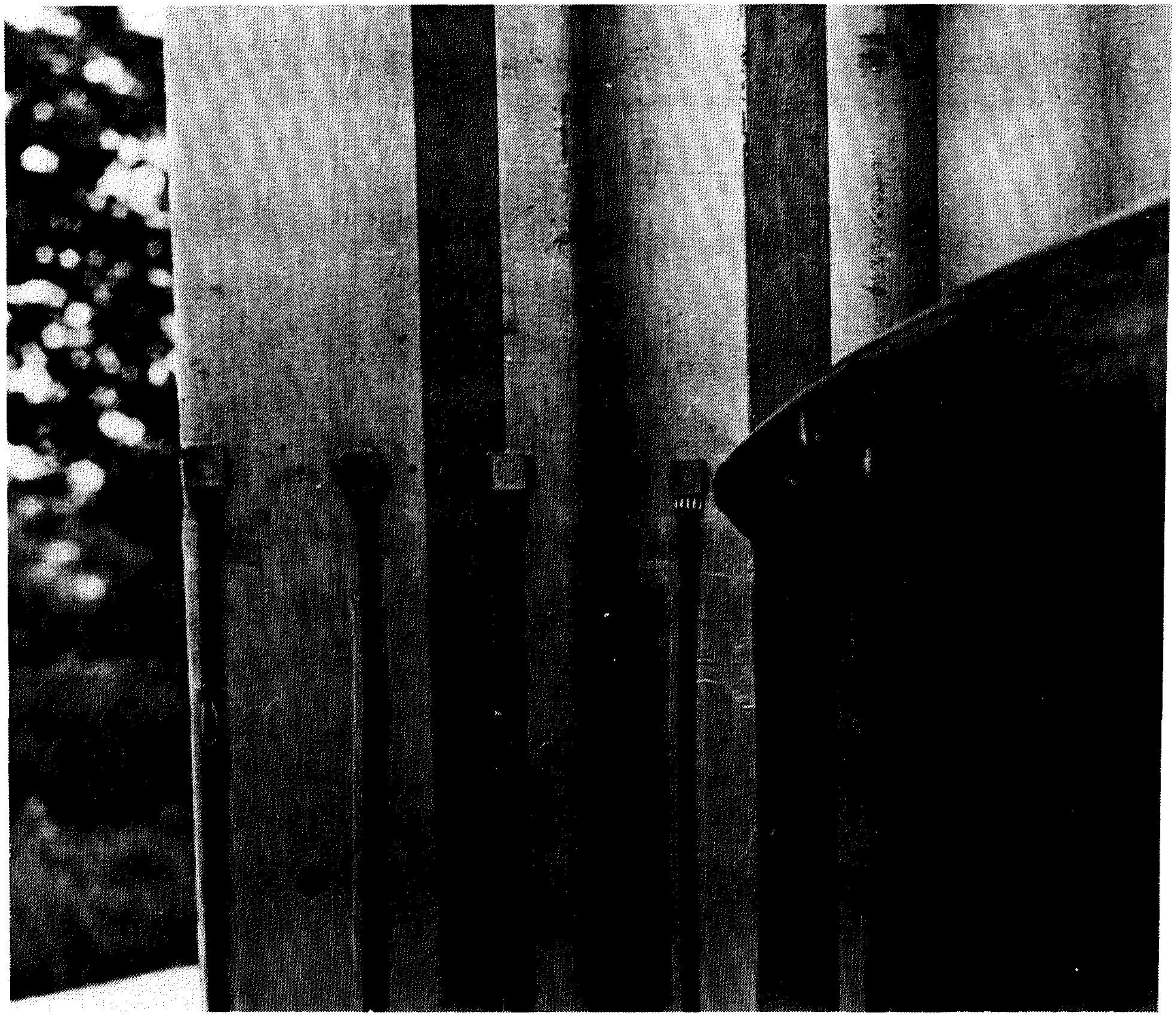


Figure 4-8.- Installation of Kulite pressure transducers on triple-slotted flap.

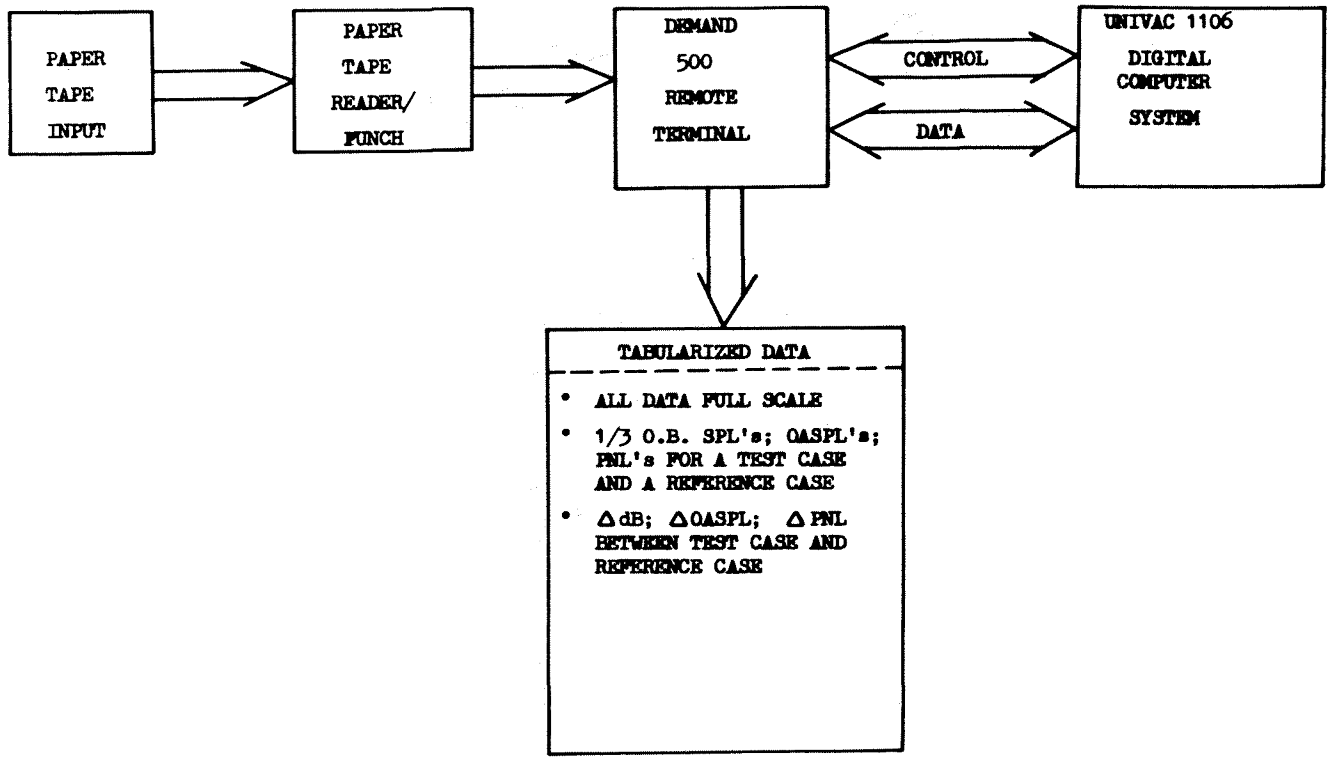


Figure 4-9.- Acoustic quick-look data reduction system.

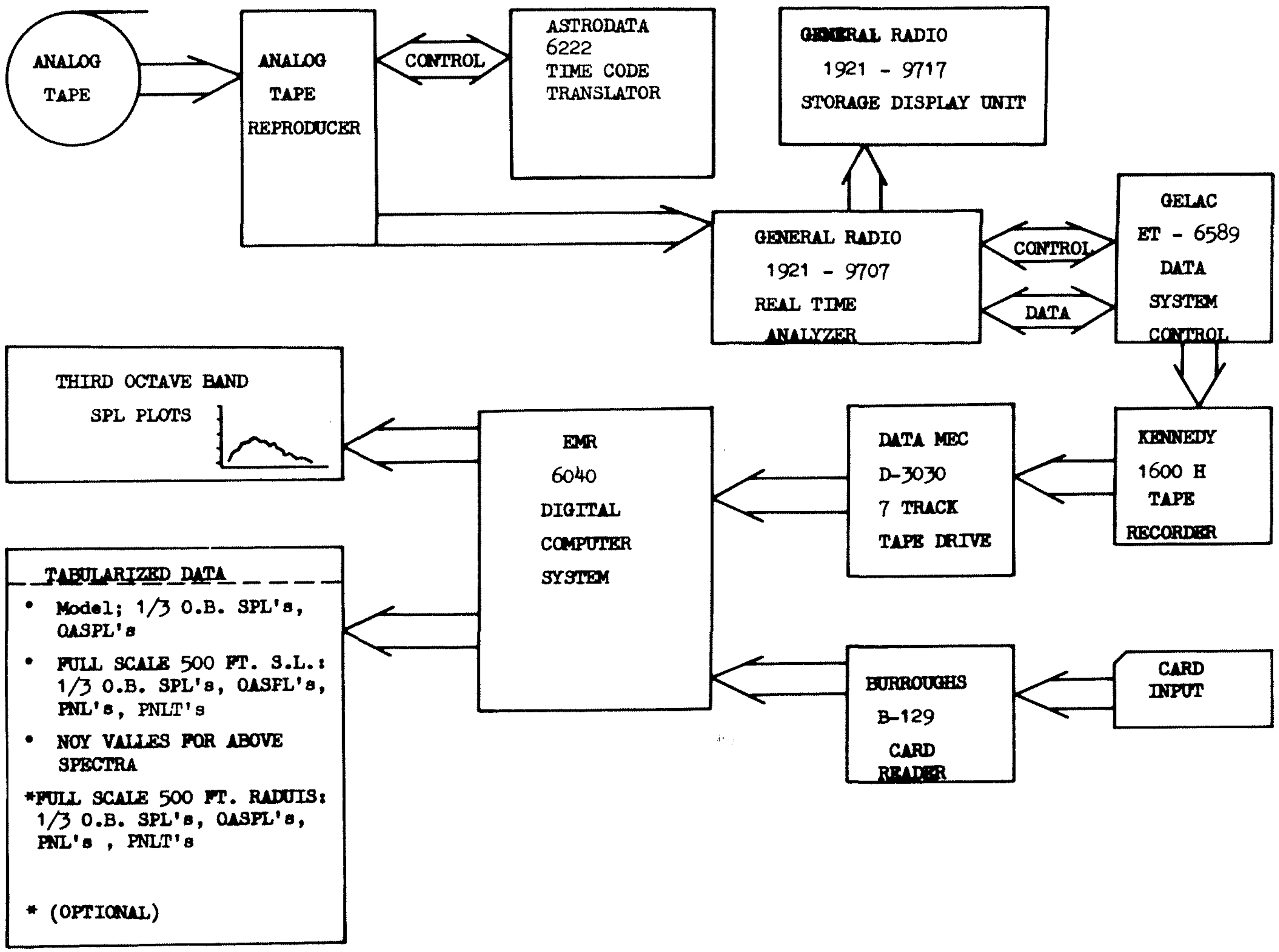


Figure 4-10.- Acoustic mass data reduction system.

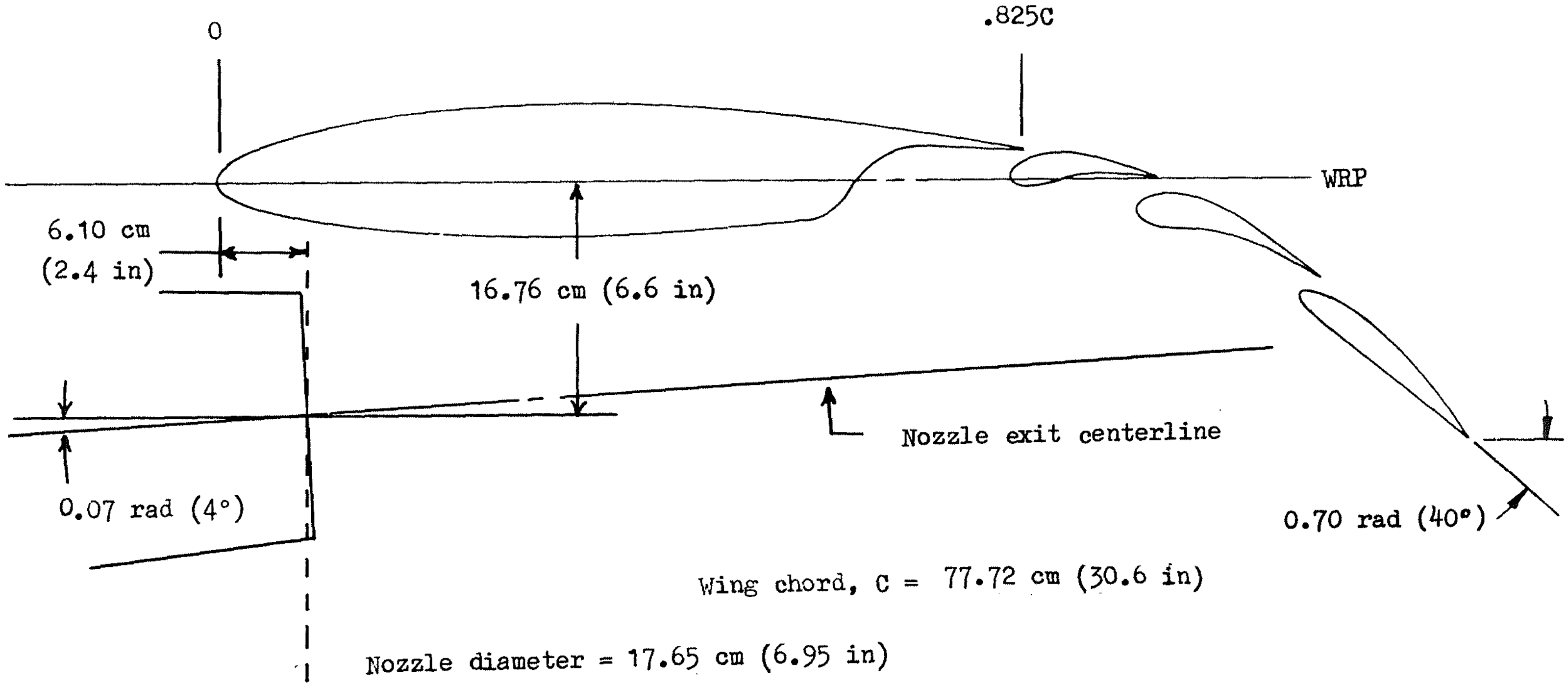


Figure 4-11.- Profile of one-fifth-scale model of baseline A nozzle/wing/flap configuration. Takeoff flap setting.

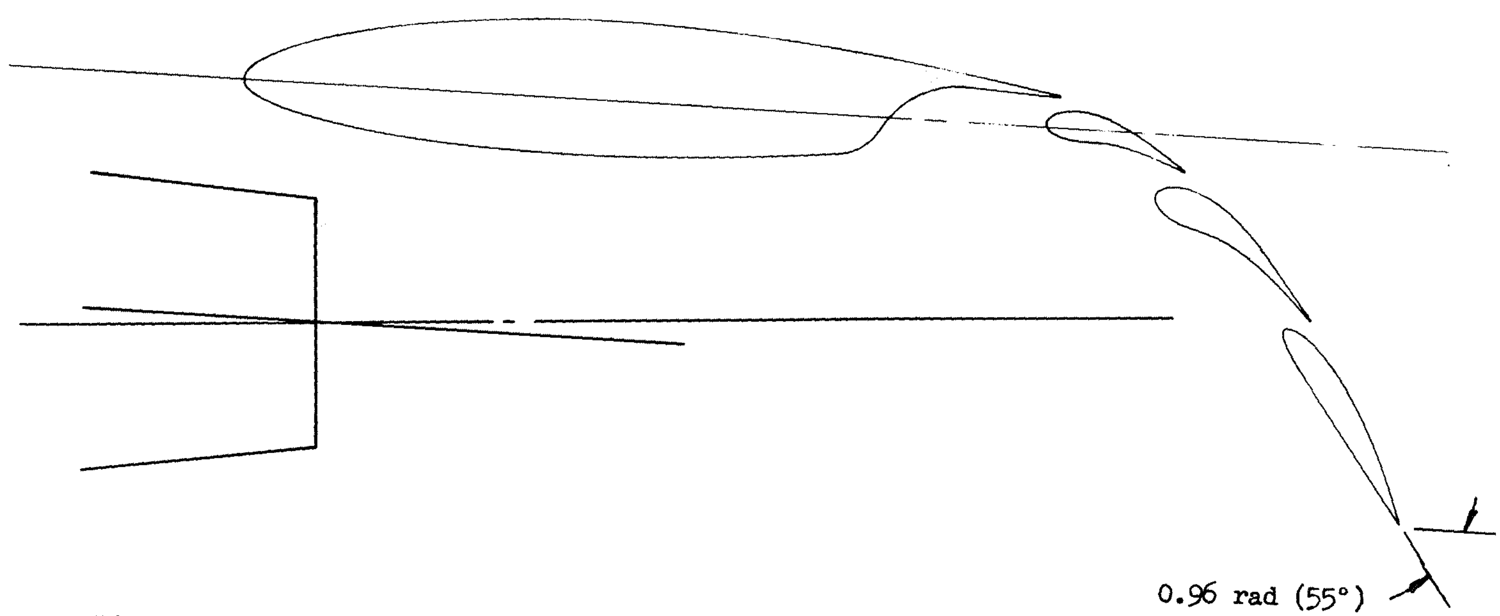


Figure 4-12.- Profile of one-fifth-scale model of baseline A nozzle/wing/flap configuration. Landing flap setting.

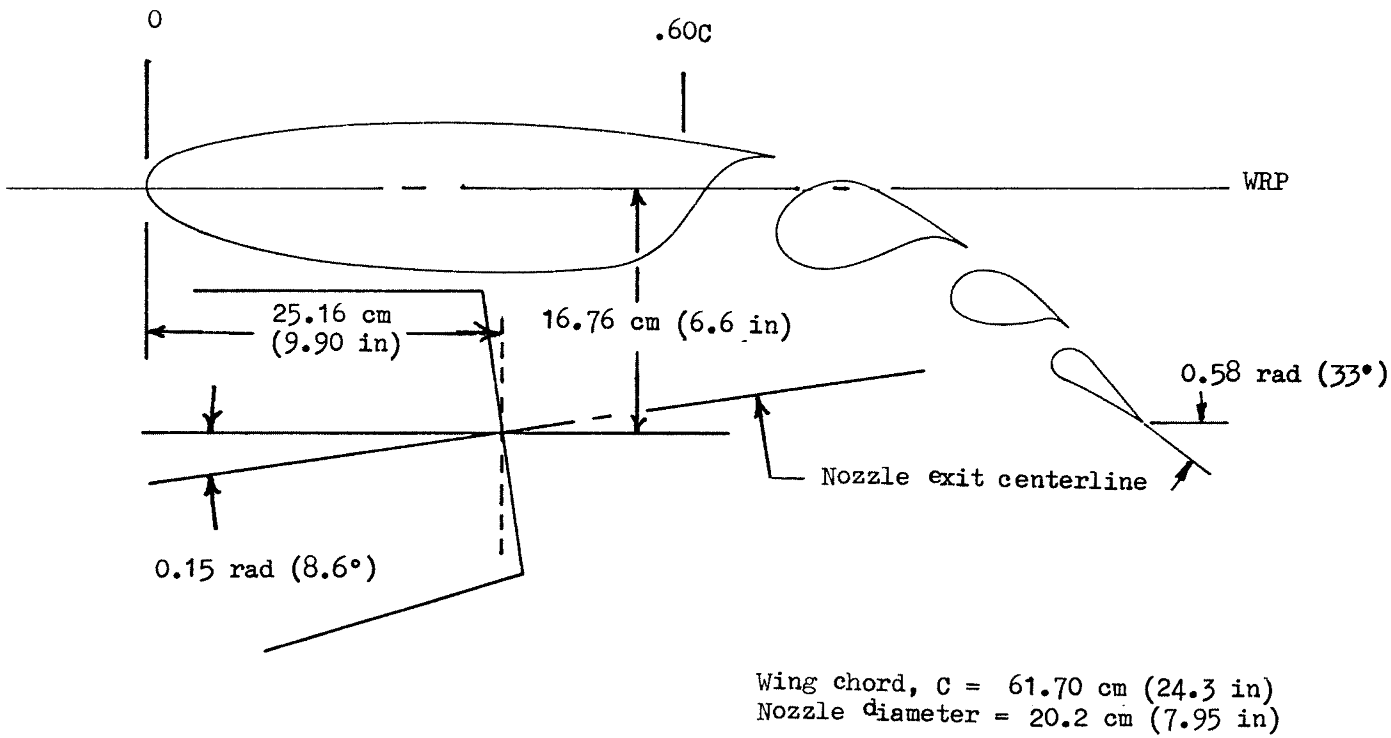


Figure 4-13.- Profile of one-fifth-scale model of baseline B nozzle/wing/flap configuration. Takeoff flap setting.

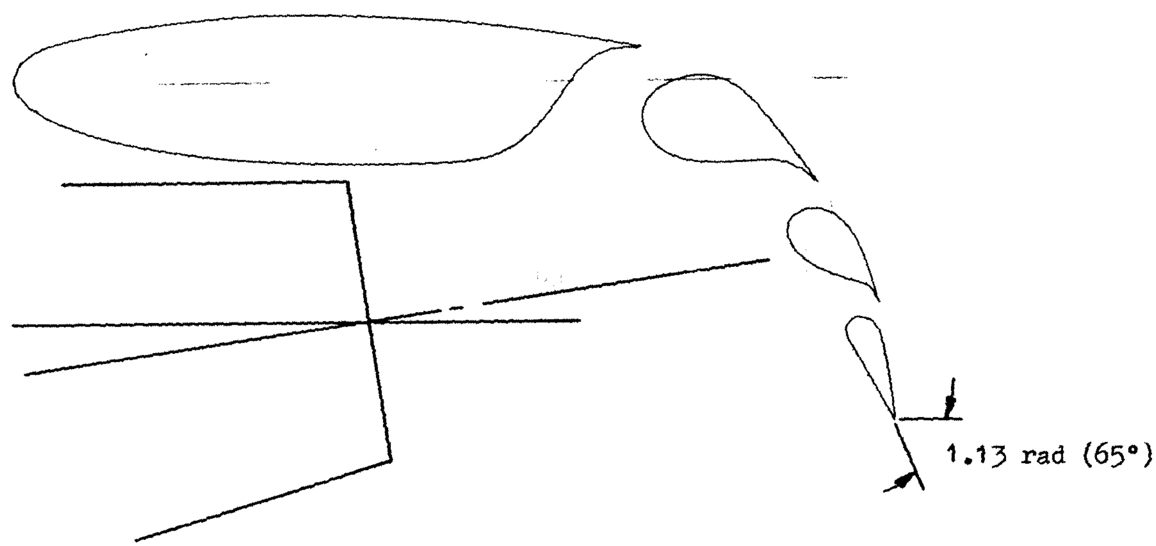


Figure 4-14.- Profile of one-fifth-scale model of baseline B nozzle/wing/flap configuration. Landing flap setting.

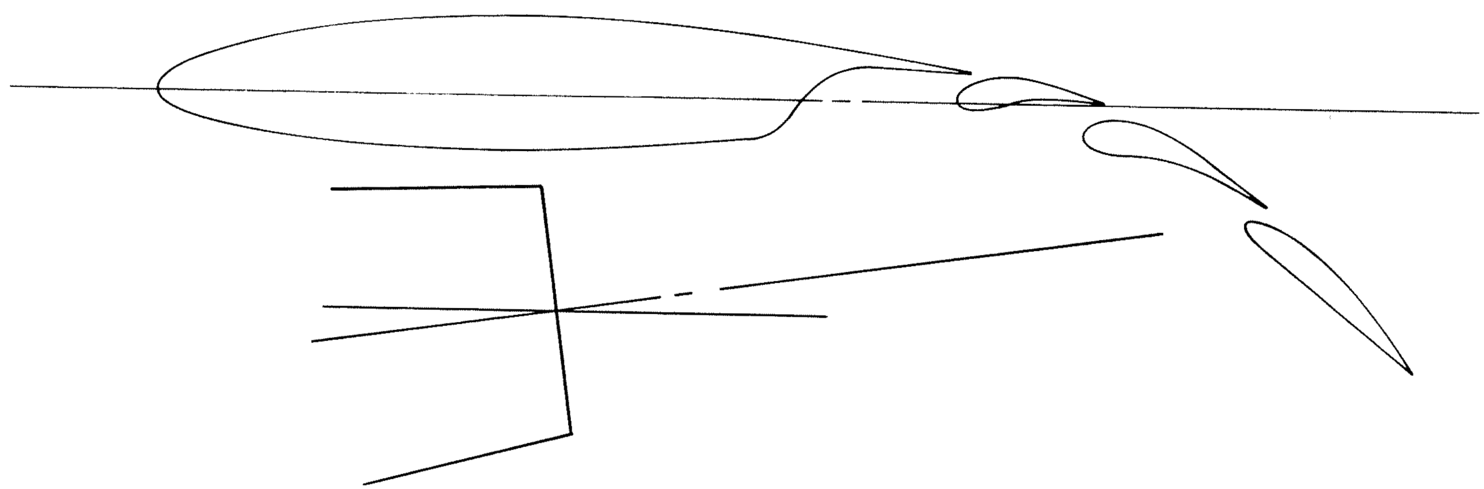


Figure 4-15.- Profile of one-fifth-scale model of baseline A configuration with nozzle at mid position and 0.15 rad (8.6°) angle relative to wing reference plane. Takeoff flap setting.

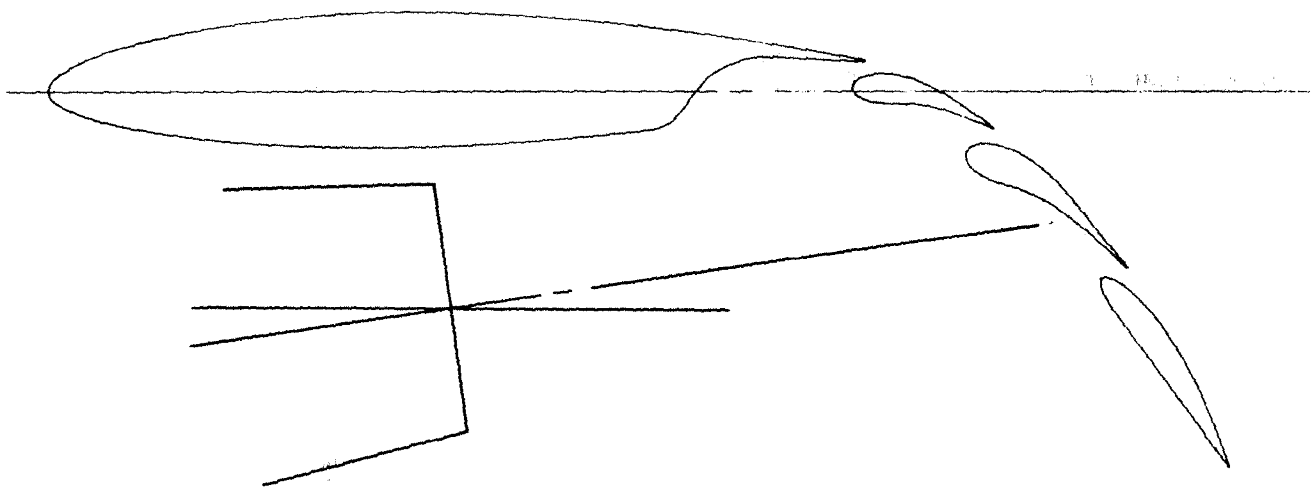


Figure 4-16.- Profile of one-fifth-scale model of baseline A configuration with nozzle at mid position and 0.15 rad (8.6°) angle relative to wing reference plane. Landing flap setting.

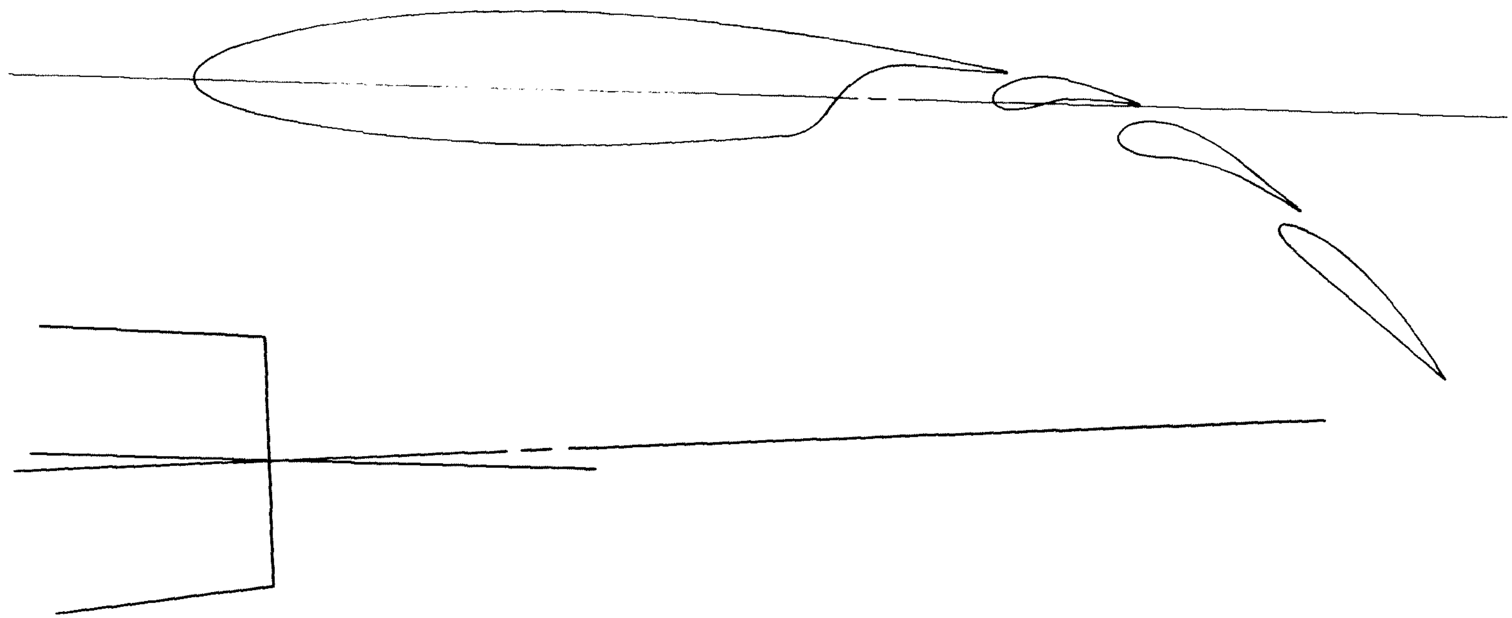


Figure 4-17.- Profile of one-fifth-scale model of baseline A configuration with nozzle lowered 10.16 cm (4 in). Takeoff flap setting.

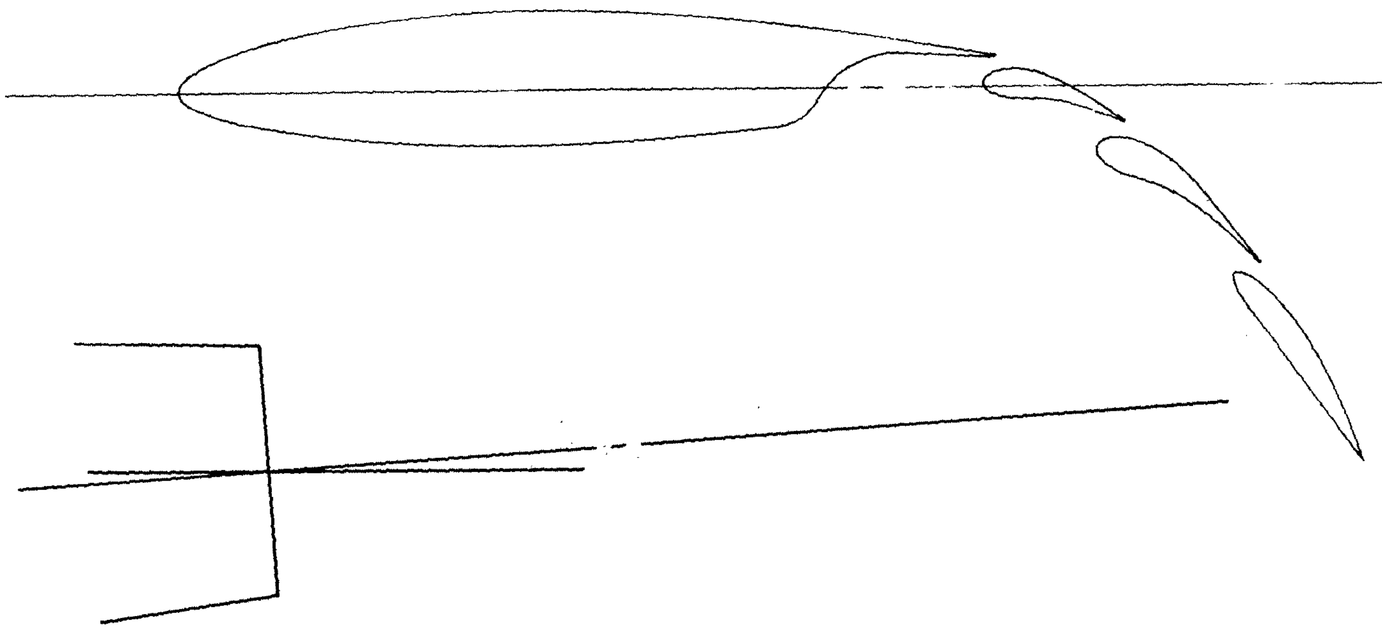


Figure 4-18.- Profile of one-fifth-scale model of baseline A configuration with nozzle lowered 10.16 cm (4 in). Landing flap setting.

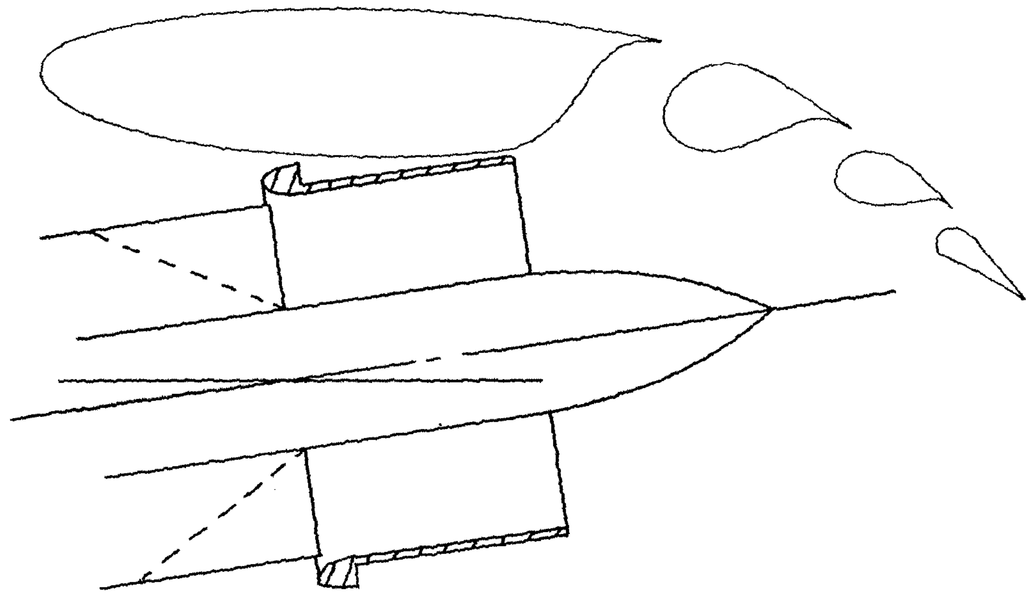


Figure 4-19.- Profile of one-fifth-scale model of baseline B configuration with mixer nozzle and treated ejector. Takeoff flap setting.

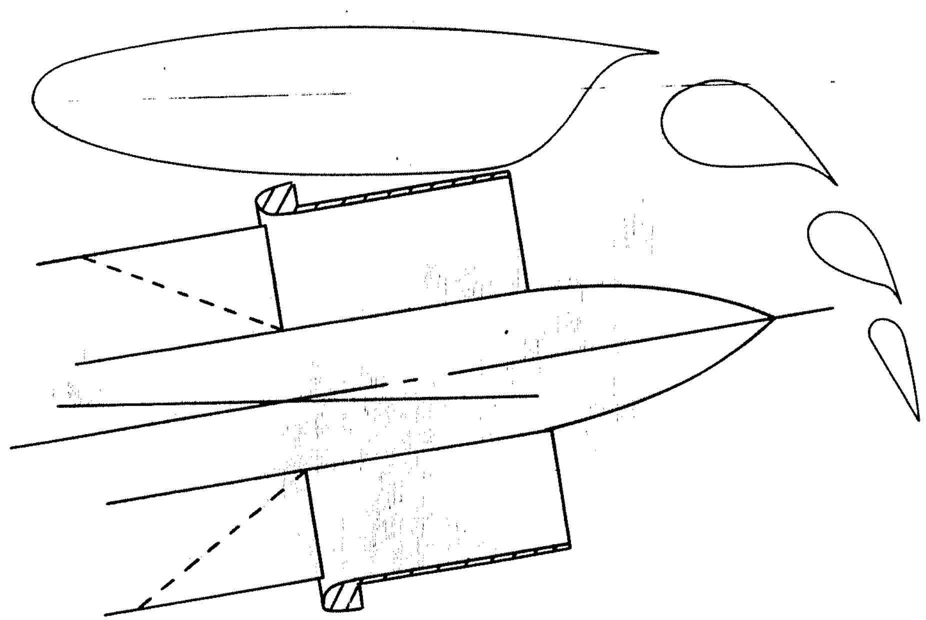


Figure 4-20.- Profile of one-fifth-scale model of baseline B configuration with mixer nozzle and treated ejector. Landing flap setting.

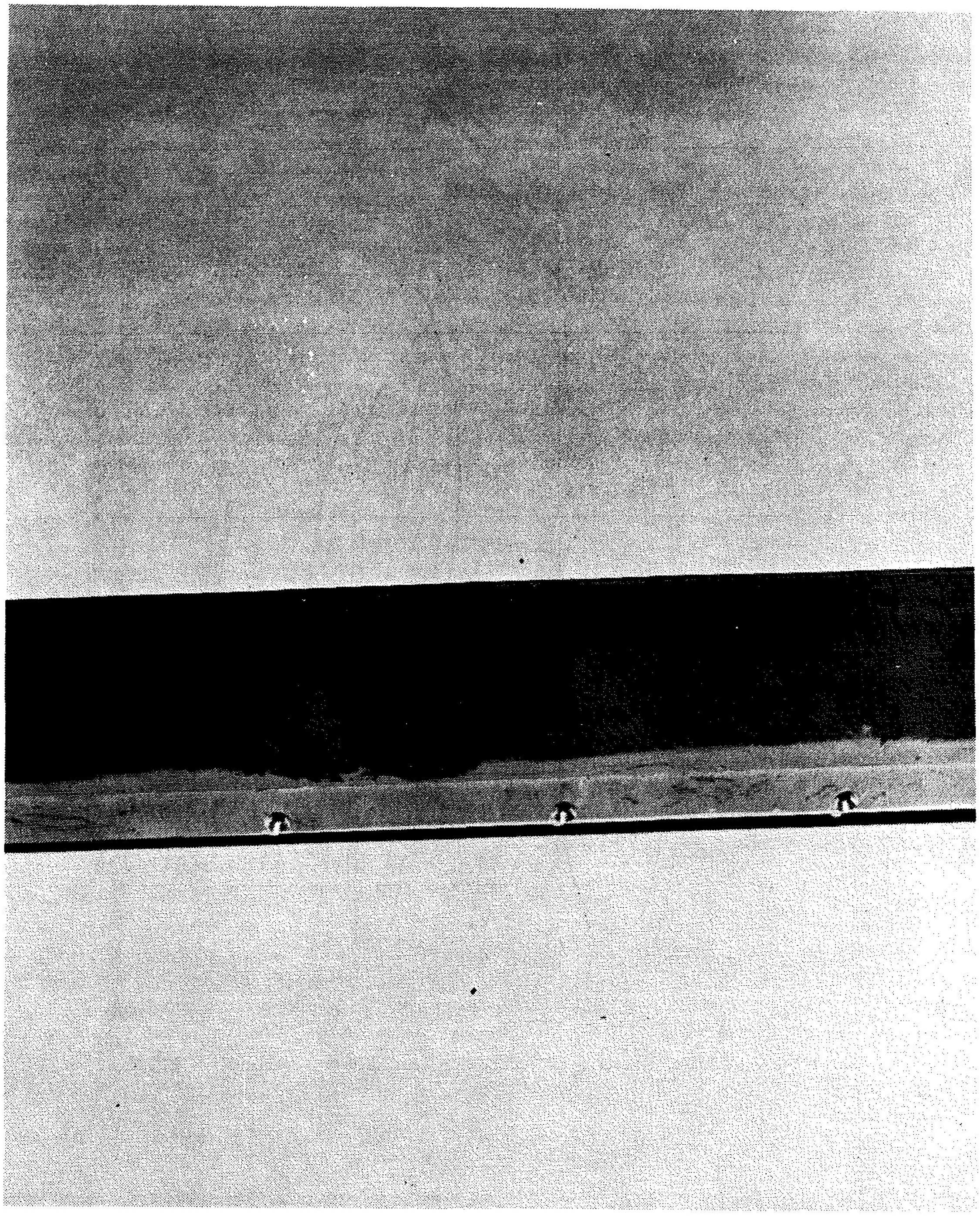


Figure 4-21.- Compliant (rubber) T.E. for baseline A.
Polyurethane wedge, grade 60.

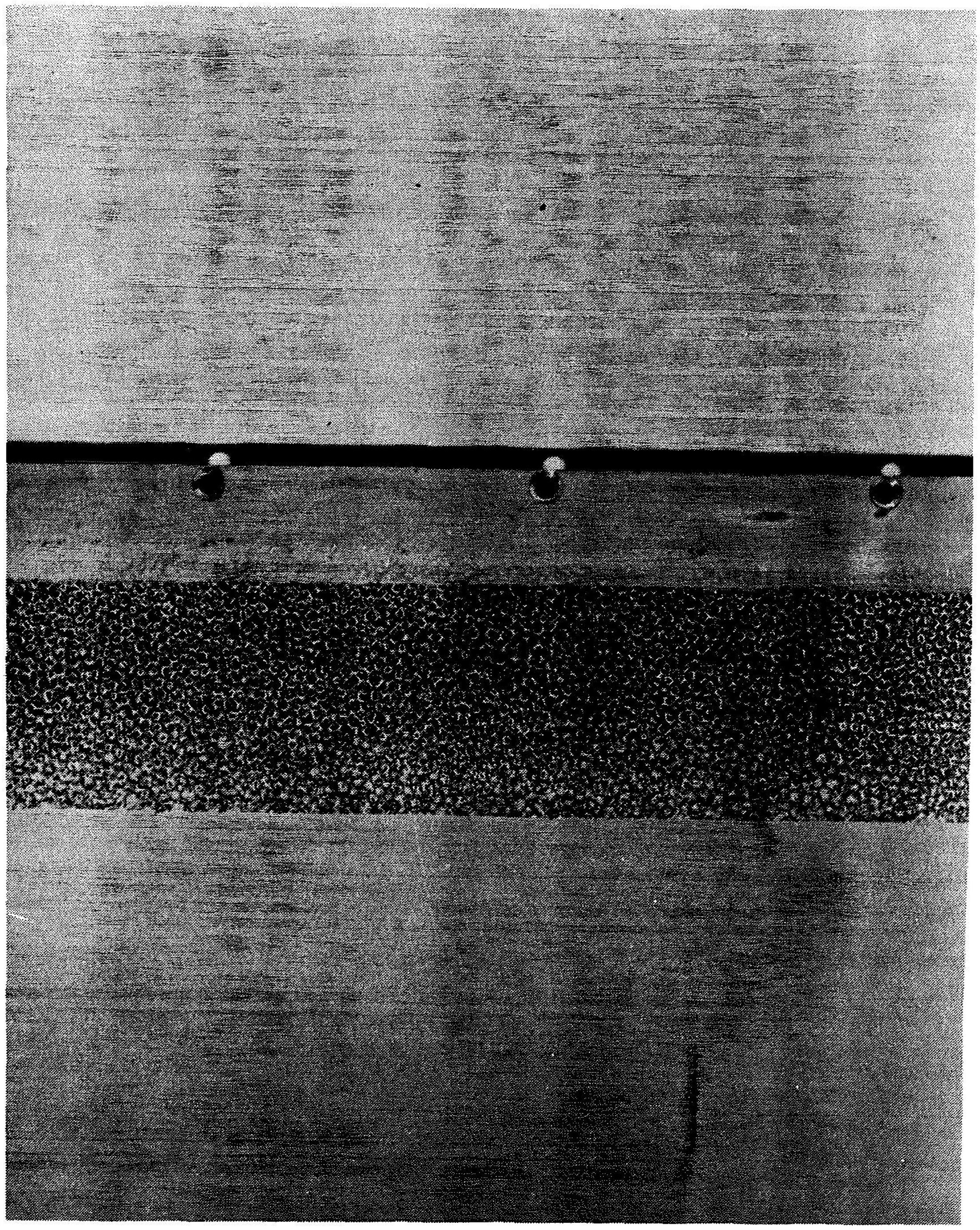


Figure 4-22.- Porous (metal foam) T.E. for baseline A.
Retiment wedge, grade 20 (coarse) nickel.

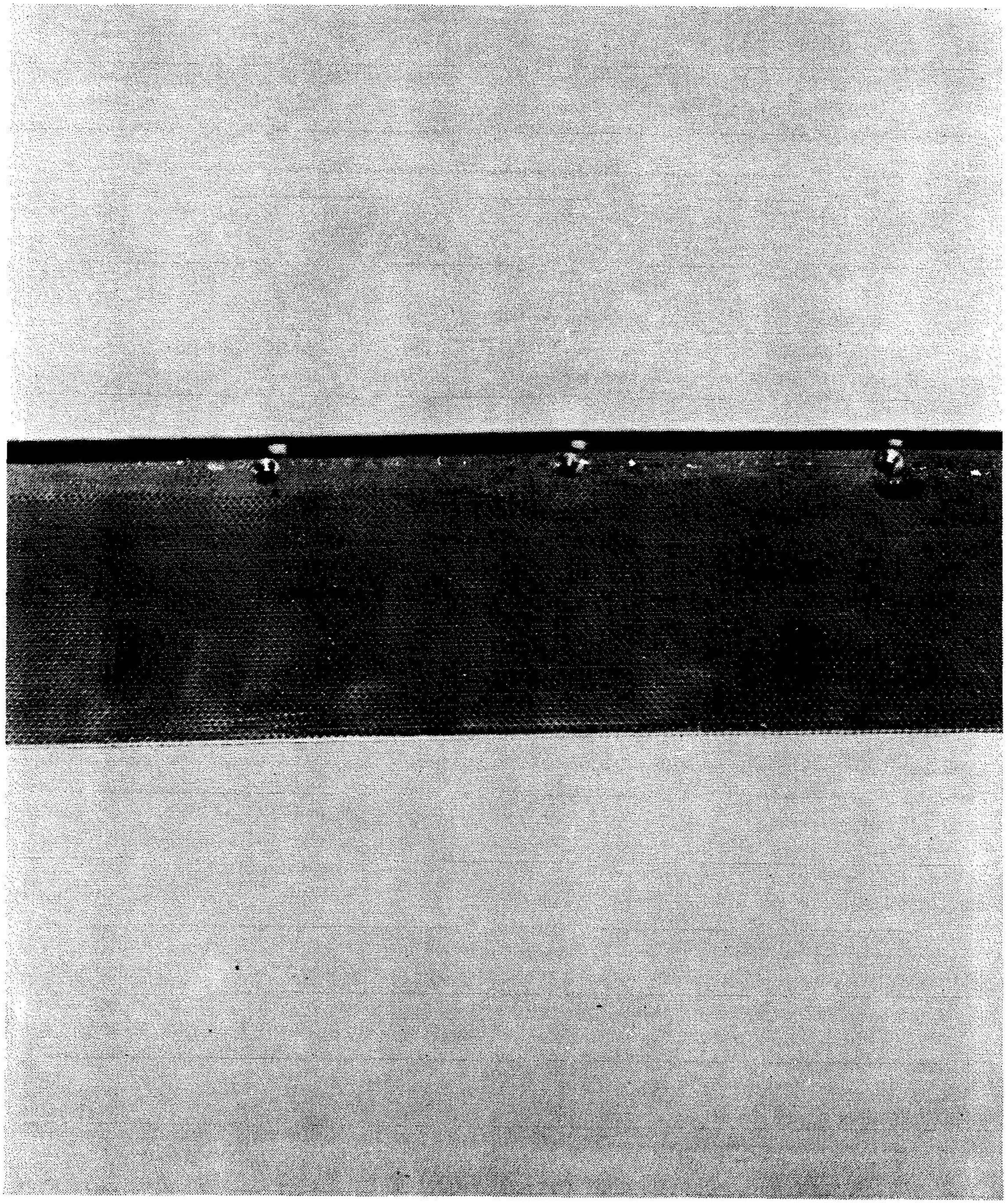


Figure 4-23.- Perforated T.E. for baseline A. Brass sheet, 0.058-cm dia. holes, 18% porosity.

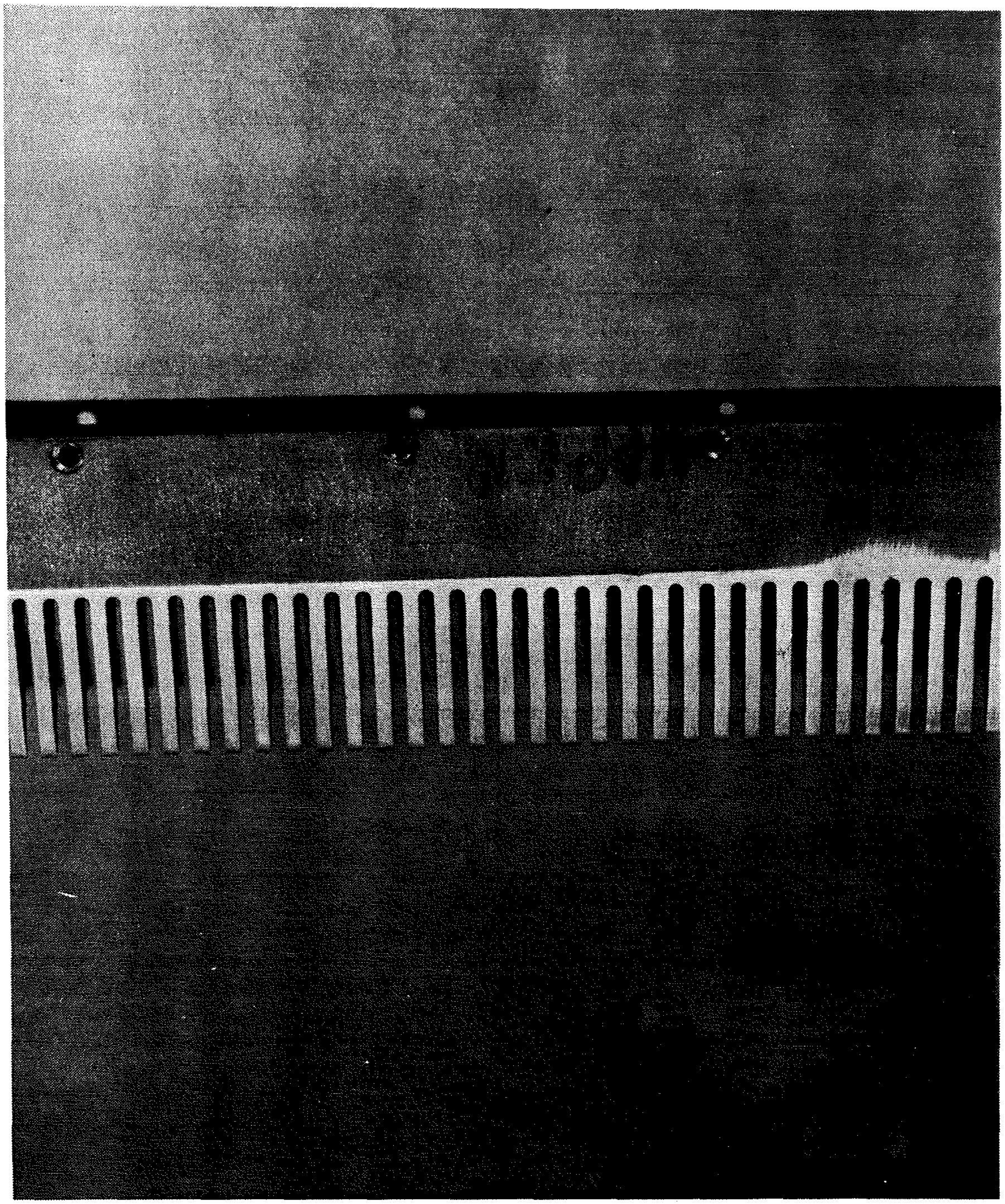


Figure 4-24.- Serrated T.E. for baseline A. Metal wedge, teeth and gaps 0.32 cm wide by 3.23 cm long.

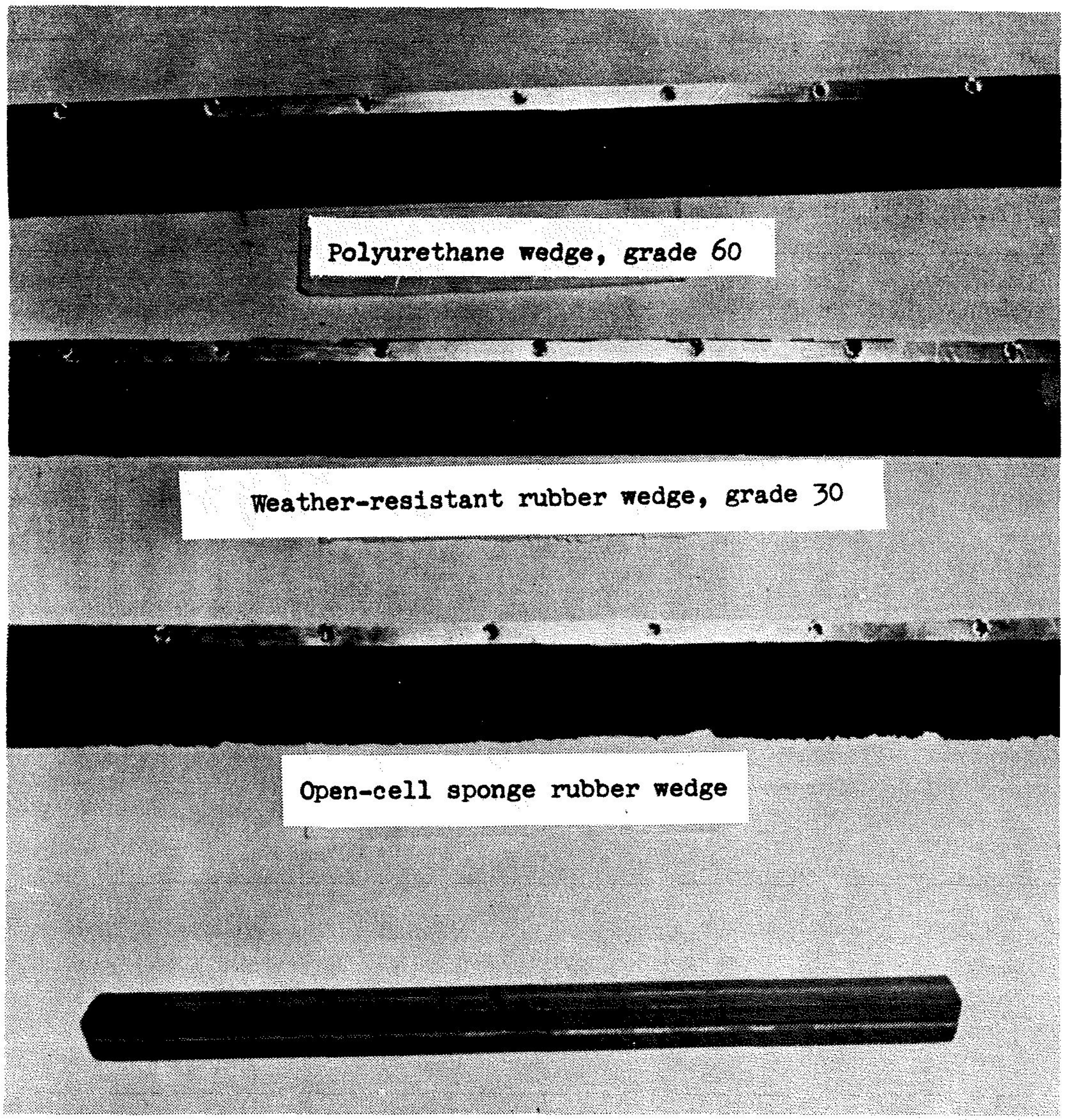


Figure 4-25.- Compliant (rubber) T.E.'s for baseline B.

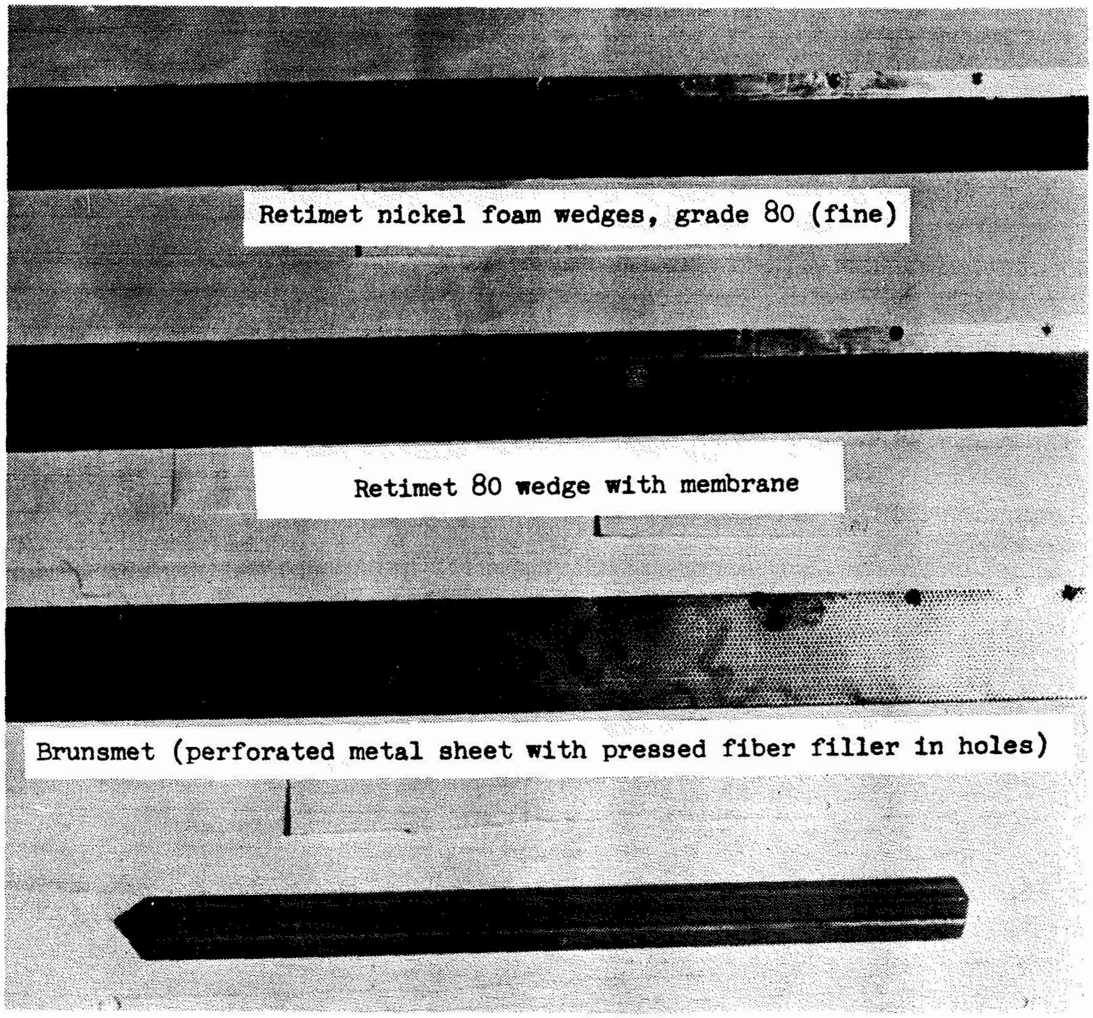


Figure 4-26.- Porous T.E.'s for baseline B.

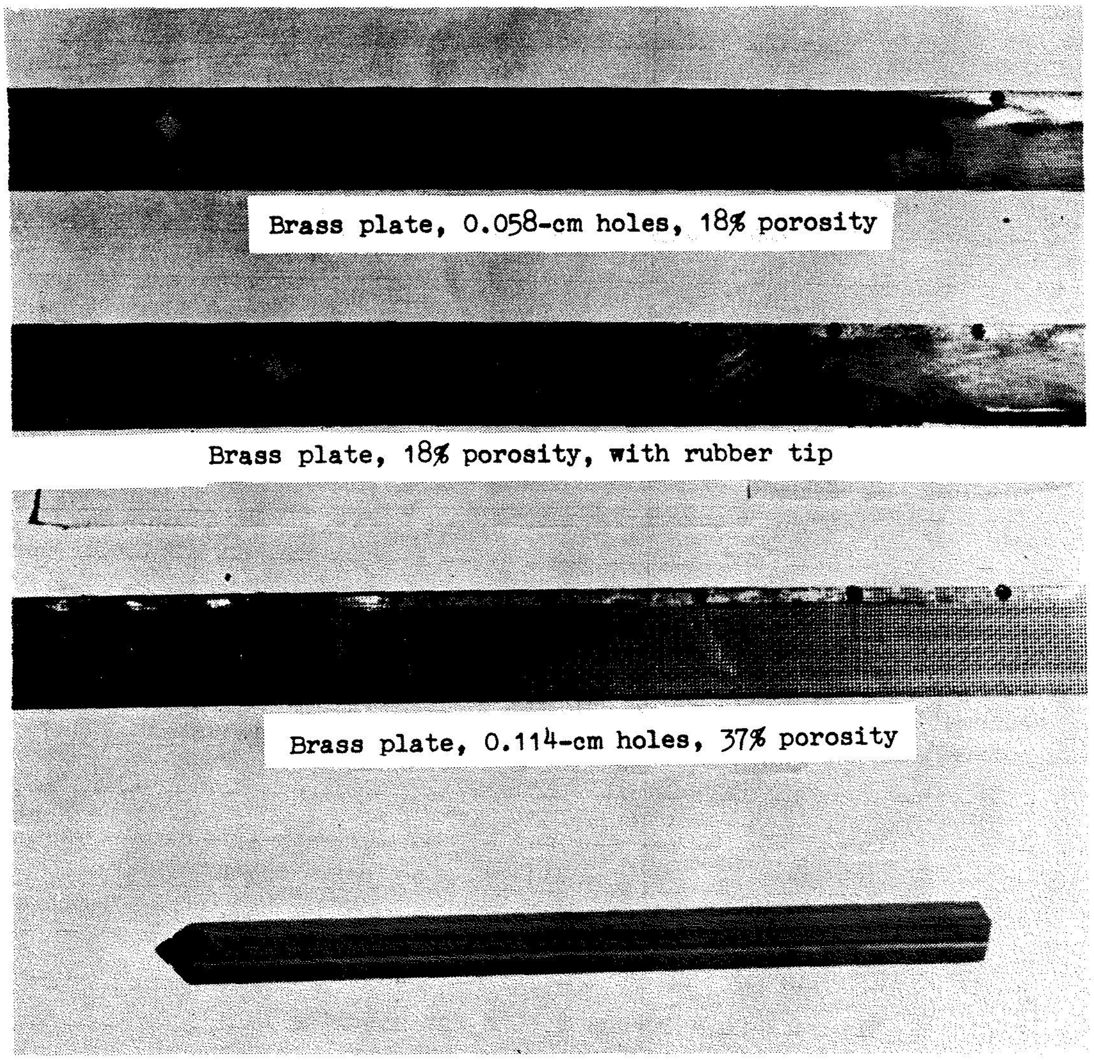


Figure 4-27.- Perforated T.E.'s for baseline B.

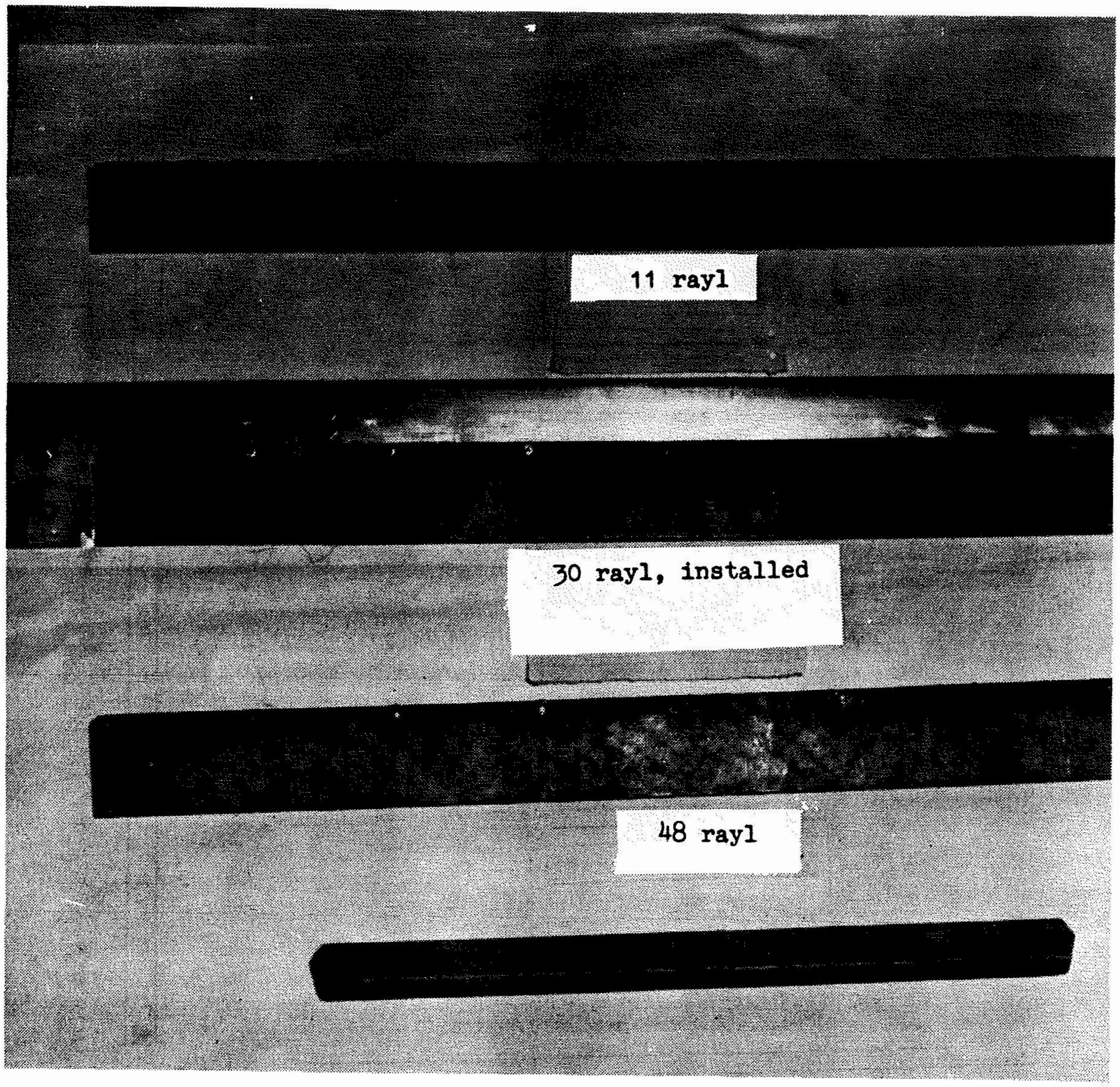


Figure 4-28.- Feltmetal sheet T.E.'s for baseline B.

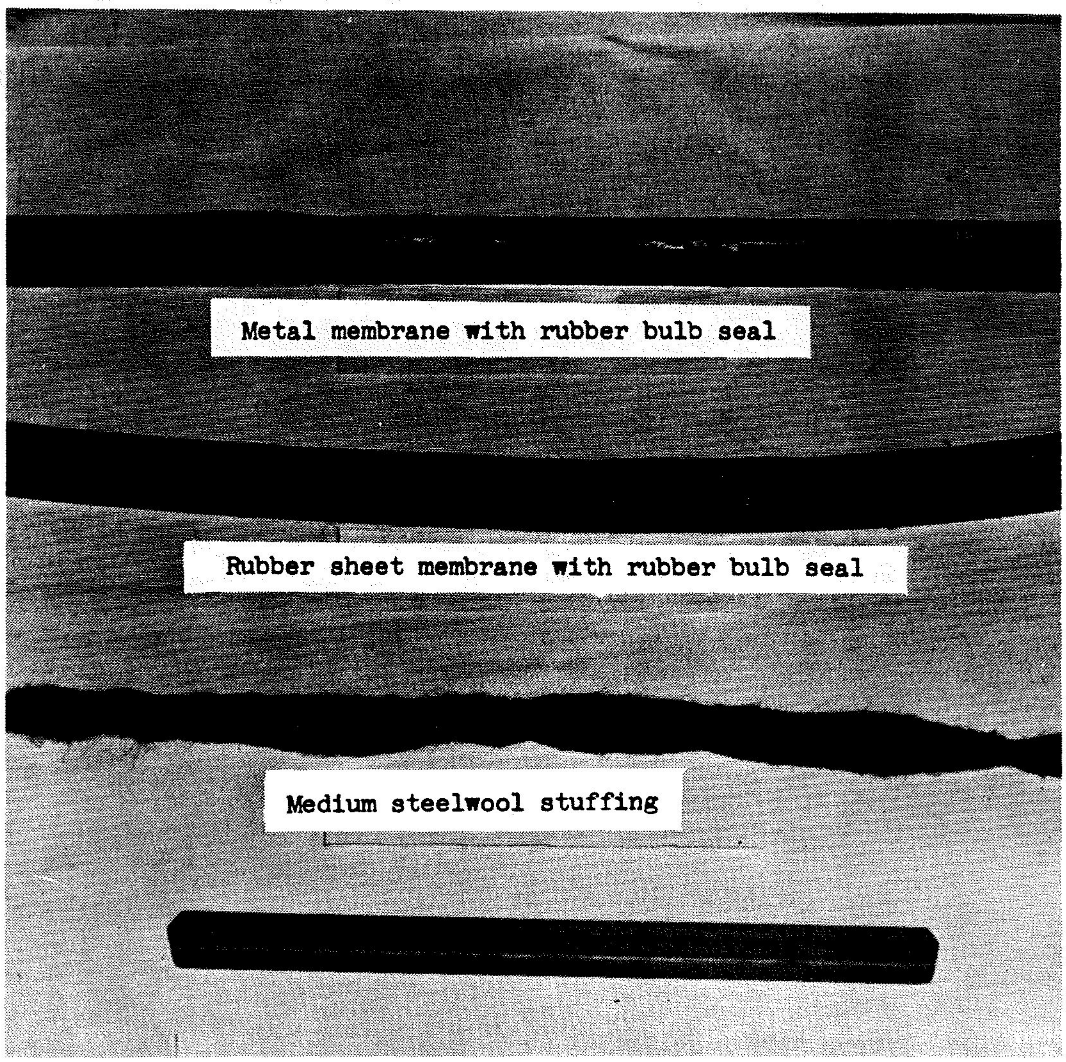
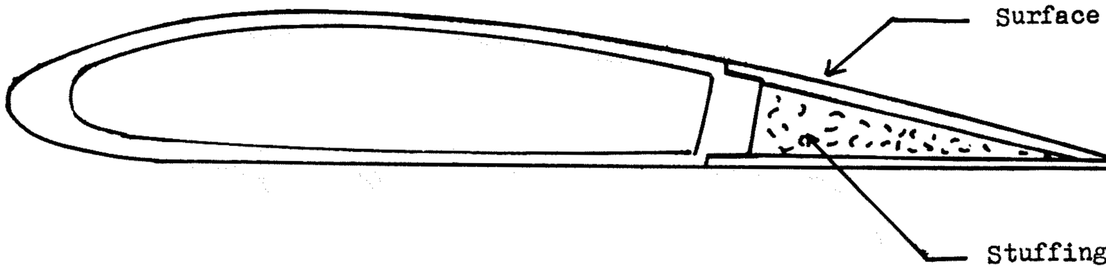
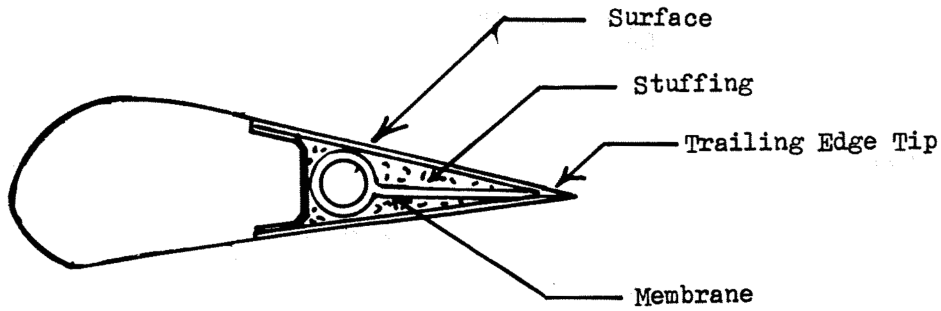


Figure 4-29.- Interiors for porous, perforated, and feltmetal T.E.'s with cavities, baseline B.



Baseline A



Baseline B

Figure 4-30.- Third-flap sections and nomenclature.

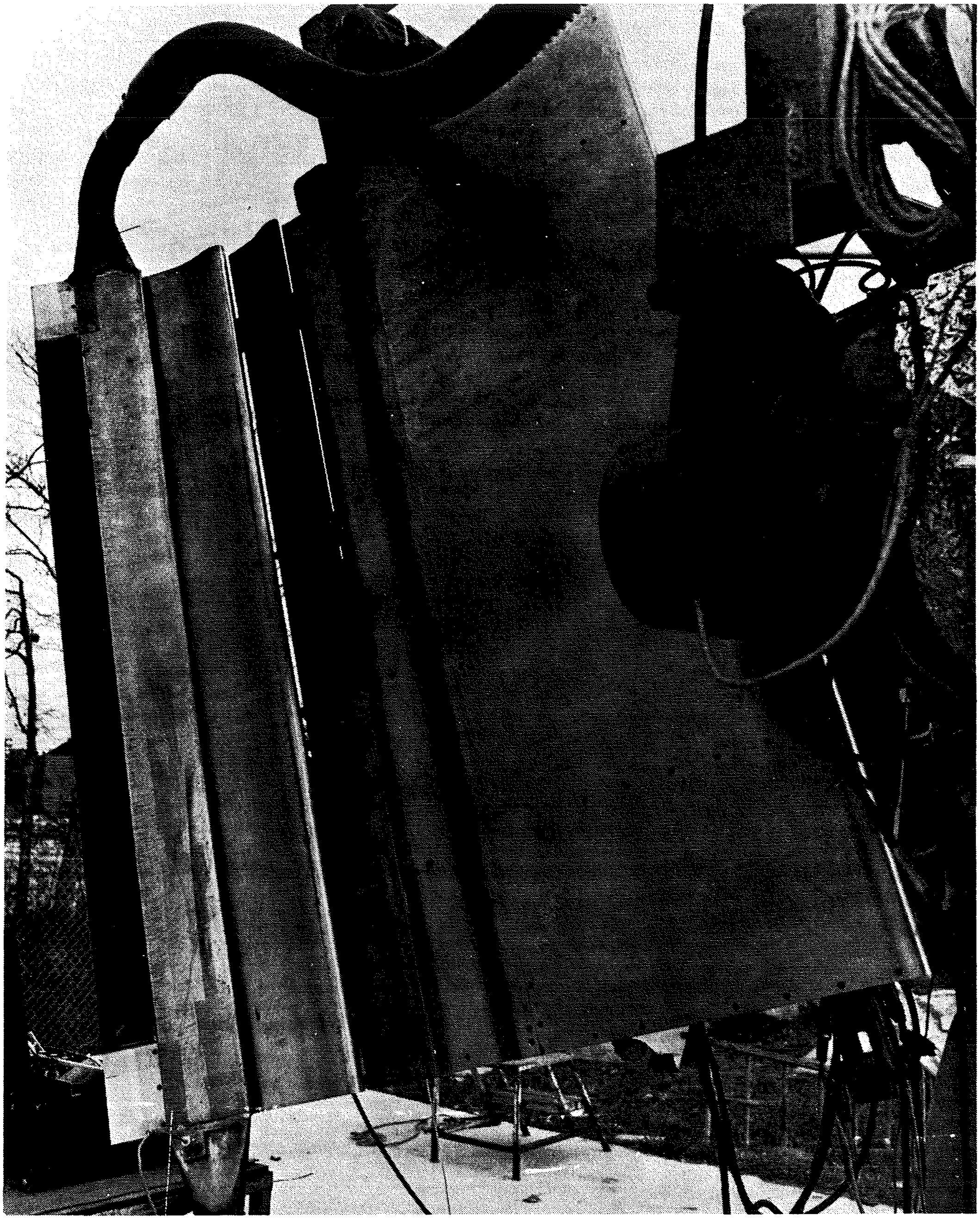


Figure 4-31.- Baseline A wing/flaps with air supply to third flap. Takeoff flap setting.

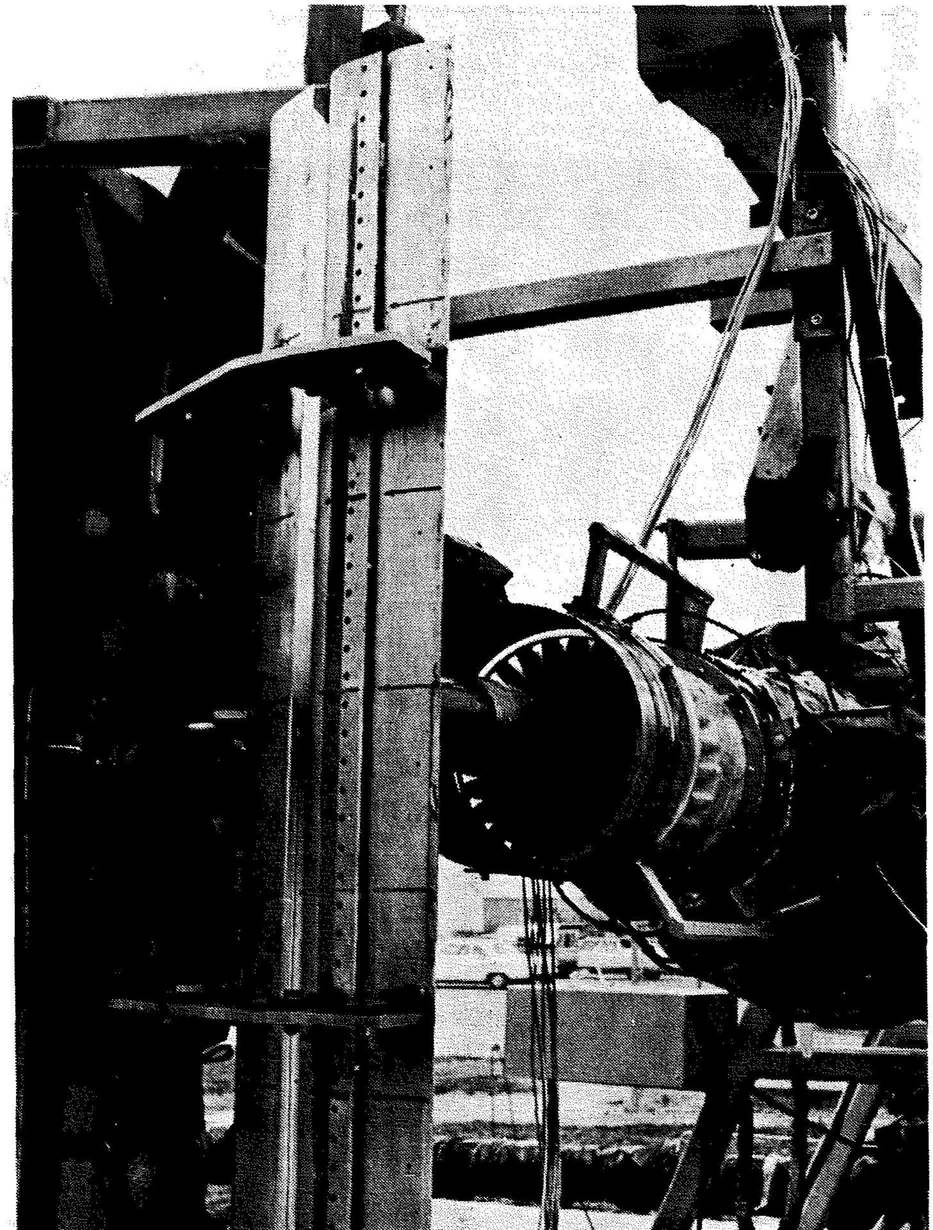


Figure 4-32.- Baseline B with mixer nozzle and treated ejector.
Landing flap setting.

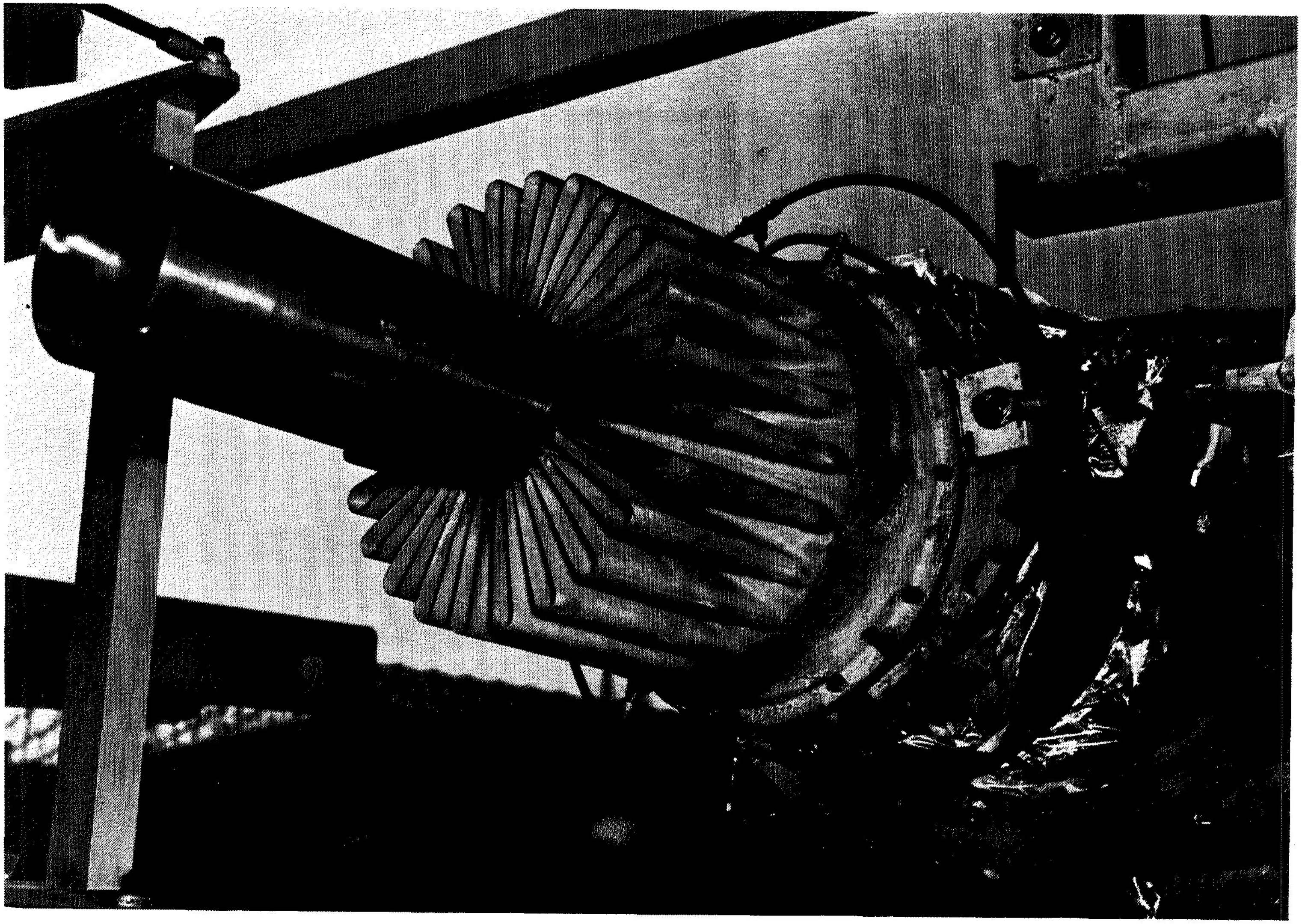


Figure 4-33.- Mixer nozzle.

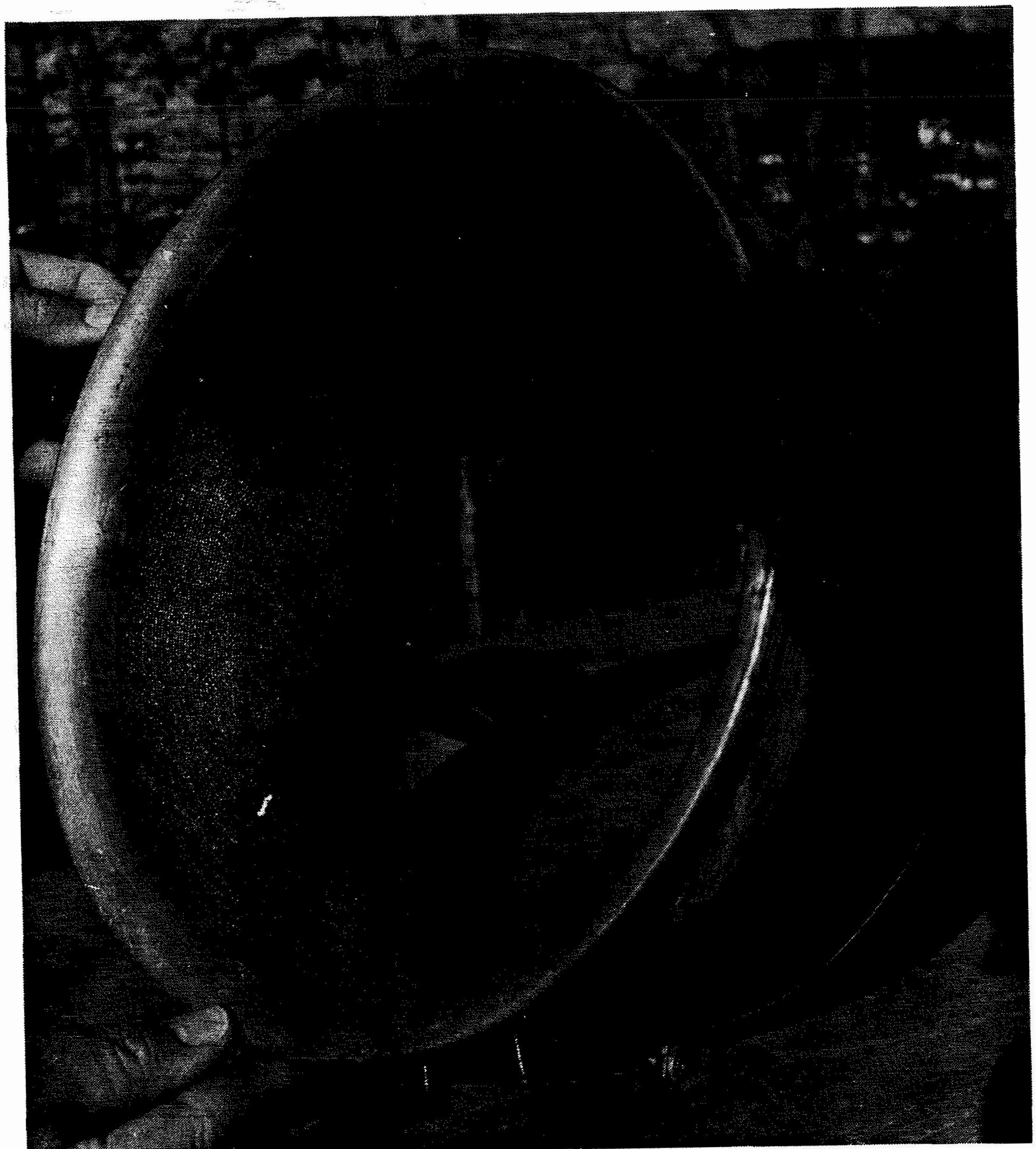


Figure 4-34.- Treated ejector.

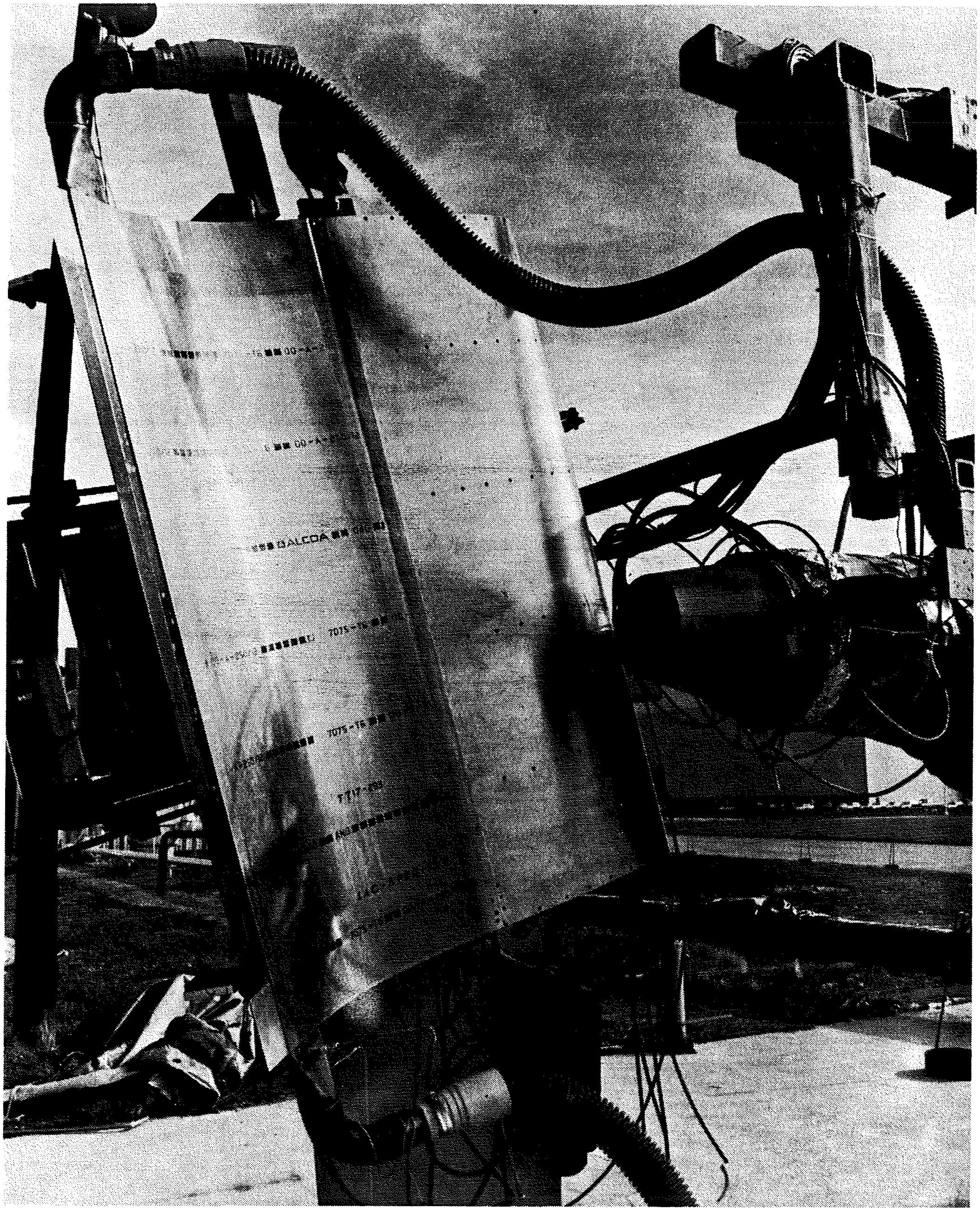


Figure 4-35.- Baseline A with one-piece fairing and T.E. blowing. Takeoff flaps.

Table 4-I.- Third-flap trailing edge treatments.

3rd Flap Trailing Edge Treatment

Series 1 Test

Type Surface	Material Description	Stuffing
Compliant	Polyurethane Wedge, Grade 60	None
Porous	Retimet, Metalfoam, Grade 20	None
Perforated	Brass Plate, .058 cm Diameter Holes, 18% Porous	None
Perforated	" " " " " " "	Steelwool, Medium
Serrated	Serrated Metal Plate, Teeth and Gap .32 cm by 3.23 cm	None

Series 2 Test

Type Surface	Ident.	Material Description	Membrane	Stuffing
Compliant	3A	Sheet Rubber, Polyurethane, Grade 60	-	-
Compliant	3B	Sheet Rubber, Weather Resistant Shore 30	-	-
Compliant	3C	Sheet Rubber, Sponge, Open Cell	-	-
Porous	3D	Nickel Retimet, 80 Grade	-	-
"	"	" " " "	Hard	-
Perforated	3E	Brass Plate; .058 cm Dia. Holes, 18% Porosity	-	-
"	"	" " " " " " "	Hard	-
"	"	" " " " " " "	-	Steelwool, Medium
"	"	" " " " " " "	Hard	" "
"	"	" " " " " " "	Rubber	-
"	"	" " " " " " "	"	Steelwool, Medium
"	3F	Crescent Plate, .114 cm Dia. Holes, 37% Porosity	Hard	-
"	"	" " " " " " "	Rubber	Steelwool, Medium
Porous	3G	Brunsmet, Labeled 01301 & 266	-	-
Feltmetal	3H	Feltmetal, Rayl 11	-	-
Feltmetal	3J	Feltmetal, Rayl 30	-	-
"	"	" " "	-	Steelwool, medium
"	"	" " "	Rubber	" "
"	3K	Feltmetal, Rayl 48	-	-
Perforated	3L	Brass Plate, 0.058 cm Dia. Holes, 18% Porosity; Sheetrubber Weather Resistant, Shore 30, Trailing Edge Tip.	-	-
"		" " " " " " " "	-	Steelwool, Medium

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5. WIND TUNNEL TEST DESCRIPTION

Facility

The facilities used for the wind tunnel testing were the Lockheed-Georgia low-speed wind tunnel shown in figure 5-1 and the adjacent L-7 building, which houses the acoustic data acquisition equipment described in the previous section.

Wind tunnel.- Figure 5-2 shows the general arrangement of the tunnel, which has a closed loop and two test sections. The tunnel is powered by a 6700-watt electric motor directly coupled to a fixed-pitch six-bladed fan made of laminated sitka spruce. Tunnel q is controlled by varying fan speed. Settling-chamber-to-test section static pressure differential, measured by Baratron transducers with an accuracy of 0.1% of the reading, is the source of the q measurement. The time-dependent variation in q is negligible at low speeds and is about 4.8 N/m^2 at the high end of the range.

The test was conducted in the second and smaller of the two test sections, which is designated the low-speed section as distinct from the V/STOL section. To minimize acoustic reflections and approach anechoic test conditions the test section was lined with a 5.1-cm (2-in) thickness of open-cell flexible foam, as shown in figure 5-3. The foam was glued to sheets of plywood which were attached by drive-screws to the wooden floor (including the turntable), walls, and ceiling of the test section.

Figure 5-4 shows the control and data recording area, which is adjacent to the test sections.

A six-component pyramidal external balance system, shown in figure 5-5, is installed under the test section. The forces on the model are restrained by links connecting the balance to precision weighbeams. Each weighbeam is self-balanced by moving a jockey weight along the beam as a function of the applied load. The position is measured by an optical linear encoder to an accuracy of ± 0.0127 mm. The electrical output of the encoder is converted to the appropriate signal level by solid-state logic for entry into the data acquisition system. Three ranges of balance readout

sensitivities (high-resolution, basic, and extended-range) are provided to accommodate a wide range of loads.

The overall accuracy of the balance has been calculated and checked experimentally. The accuracies of the six components are approximately:

Strut-Supported Full-Span Model	Floor-Mounted Semispan Model	
Lift	Side Force	± 4.4 N
Drag	Drag	± 1.8 N
Side Force	Lift	±13.3 N
Pitching Moment	Yawing Moment	± 1.4 m-N
Rolling Moment	Rolling Moment	± 1.4 m-N
Yawing Moment	Pitching Moment	± 4.1 m-N

Acoustic data acquisition facility.- The L-7 building, previously described, houses the acoustic data acquisition equipment and is located approximately 200 m from the wind tunnel test section. This area was manned during the test to acquire and partially reduce the acoustic data. A direct communications link was installed to coordinate the testing.

Instrumentation and Data Handling

Acoustic.- Twelve 6.35-mm (0.25-in) B&K model 4136 microphones were installed in the test section as shown in figure 5-3. The microphones were attached to the ends of 2.5-cm diameter wooden dowels approximately 0.5 m long which were supported horizontally from 5-cm diameter steel pipes mounted to the floor or ceiling. Two arrangements of the microphones were used, with all microphones located on a 2.44-m (8-ft) radius. For nozzle-alone tests, the microphones were located as shown in figure 5-6 and for all other tests as shown in figure 5-7.

The microphones were the same as those used in the static tests except that B&K model UA0385 nose cones, calibrated by the manufacturer, were attached to the tips. The microphones were mounted so that the point of the shield faced into the wind. The B&K microphone cables were connected to line drivers which were located at the bases of the steel pipes. The line

drivers boosted the acoustic signals for transmission over the 300-m shielded coaxial cables (type RG-58) which ran to the L-7 building. The data acquisition and reduction equipment in L-7 was identical to that described in section 4, Static Test Description. Data processing and output were also the same as in the static tests.

Tunnel relative humidity was measured with a hand-held sling psychrometer. Tunnel temperature was measured with normal wind tunnel instrumentation.

Aero/propulsion.- The tunnel balance, previously described, measures the lift and drag forces on the wing/flap portion of the model. These are forces resulting from jet impingement on the flap and from freestream flow around the wing and flap. The simulated engine was mounted non-metric from the wing/flap model and balance. Nozzle forces were not measured.

Nozzle pressure ratio was measured by three total pressure probes located 1.5 nozzle diameters upstream of the exit plane and referenced to local tunnel ambient pressure. Nozzle airflow was measured using a standard ASME sharp-edged orifice in the air supply system depicted in figure 5-8. Temperature at the nozzle exit was assumed to be the same as that measured at the orifice.

The data acquisition and reduction system in the wind tunnel was used for all aero/propulsion data processing. The wind tunnel data acquisition system, shown schematically in figure 5-9, is located on the operating floor of the wind tunnel building adjacent to the control console area. The system consists of the CDC 1700 computer main frame, high-speed paper tape reader and punch, magnetic tape units, disc units, line printer, plotters, digital displays, and other peripherals. The six-component balance data, pitch angle, tunnel flow conditions, and nozzle airflow and exit pressure data were input into the digital multiplexer for data reduction and were also displayed on the control console (fig. 5-4) and the digital display rack shown in figure 5-10. The multiplexer fed data to the computer, which was controlled from the teletypewriter. The computer output was recorded on magnetic tape and also provided on-line output of reduced data and plots.

Data reduction was accomplished by standard computer programs for such parameters as C_L and V_w. A new program was written to compute special-purpose parameters such as η_T and to assemble and print out the desired data. Nozzle gross thrust was computed from the measured airflow, nozzle pressure ratio, and supply air temperature, using a velocity coefficient of 0.995. For the static runs, η_T and δ_{FV} were computed from the calculated nozzle gross thrust and the measured wing/flap forces. For the forward-speed runs, corrected C_X and C_L were computed by adding the measured C_L and C_D and the appropriate components of the calculated nozzle gross thrust coefficient, C_T.

Models

Wing/flap and fuselage.- Figures 5-11 through 5-13 show the basic model and the variations tested. The model, built to evaluate military STOL transports, represents the baseline aircraft at one-tenth scale. The wing and flap were mounted on the tunnel balance in either of two trailing edge sweep positions, 0 or 0.26 rad (15°). The fuselage was mounted on the turn-table floor, which was non-metric from the balance. Clearance was provided where the wing passed through the fuselage shell. The wing and fuselage were elevated 12.7 cm (5 in) above the foam to raise the fuselage center-plane above the boundary layer.

The test section of the flaps comprised the inboard and center flap segments shown in figure 5-11, a span of approximately 61 cm (24 in) or 7 times the nozzle diameter of 8.64 cm (3.4 in). This ratio of treated span to nozzle diameter had given satisfactory results in the static test program.

The existing inboard and center flap segments were built up with metal powder and epoxy to the contour of baseline B of the static tests. The out-board segment was outside of the test span and was not reworked. The treated third flap, which has a chord of only about 2.5 cm, was made of perforated metal wrapped around a leading edge rod, stuffed with wire wool, and tacked with solder along the trailing edge. Also shown in figures 5-11 and 5-13 are the upper and lower fairing sheets that cover the second and third slots to provide a single-slotted flap. The edges of the fairings were smoothed with

wax on installation. Flap angles of 0.576 rad (33°) for takeoff and 1.134 rad (65°) for landing were tested with both triple- and single-slotted flaps.

The nozzle was approximately centered on the flap test section, which placed it near the inboard-to-center flap split line and associated brackets. To minimize bracket noise, the bracket behind the nozzle was removed and the inner ends of the hardwall flaps were supported by submerged dowels to the corresponding inboard segments. The treated third flap extended across the two segments in a single piece.

Nozzle and air supply.- The 8.64-cm diameter conical nozzle was sized to simulate the scaled thrust of one baseline engine (344 N) at 1.3 pressure ratio. A slip joint with an O-ring seal allowed the nozzle to move axially to accommodate changes in wing sweep.

The air supply system is shown in figure 5-8. The piping was mounted on the 3.66-m (12 ft) diameter turntable in the tunnel floor. The turntable was non-metric but rotated with the model during pitch change. The riser section of the supply pipe was faired, and a two-position mount under the turntable floor allowed the piping to be raised or lowered several centimeters to hold the same impingement point when wing sweep was changed. For minimum internal flow noise, most of the supply pipe downstream of the mufflers was 15 to 20 cm in diameter, giving a duct Mach number of less than 0.15 at 1.3 nozzle pressure ratio, and the bend radius at the top of the riser was as large as possible. The two mufflers were similar to those used in the static tests.

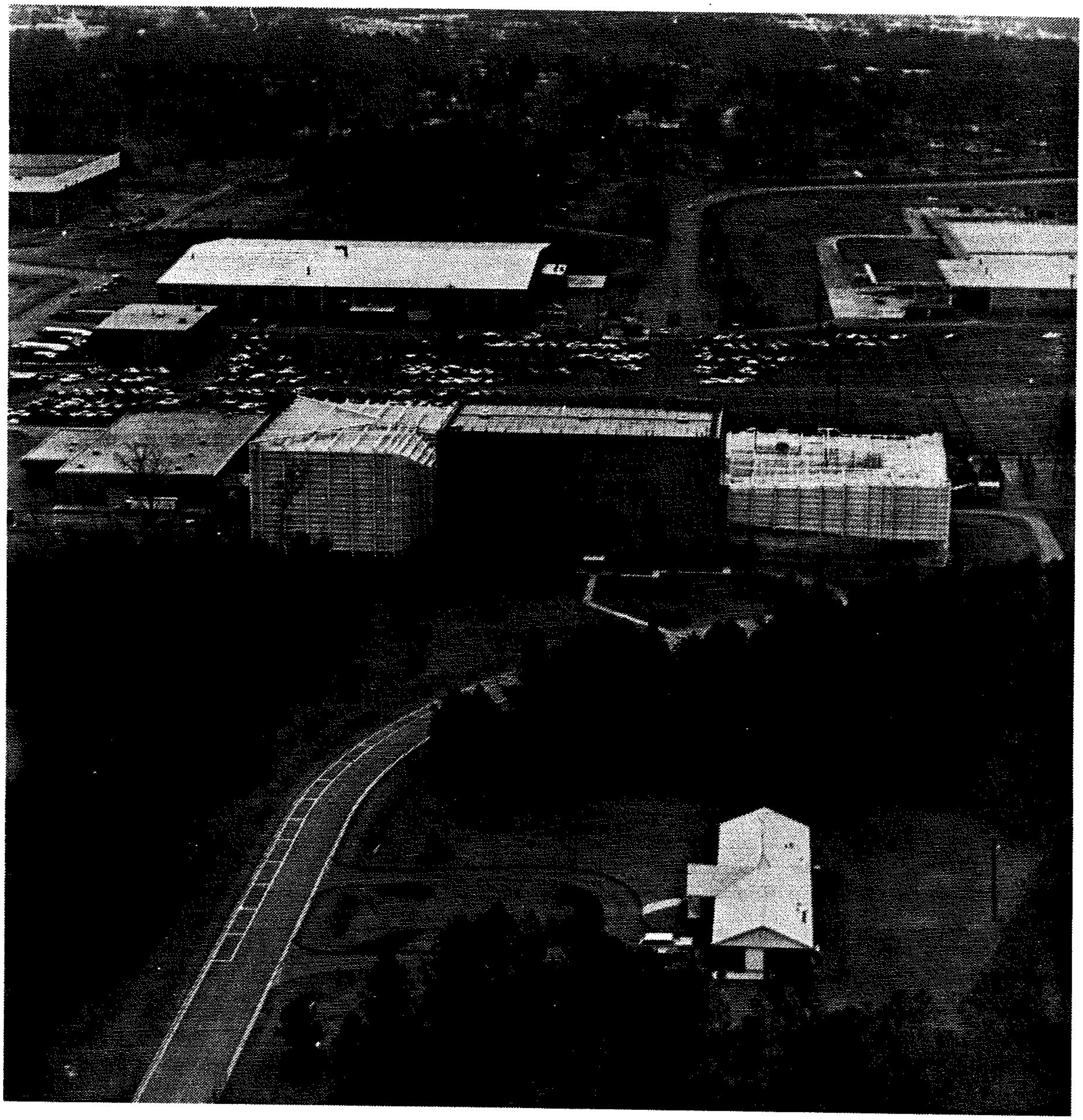

Figure 5-1.- Aerial view of wind tunnel.

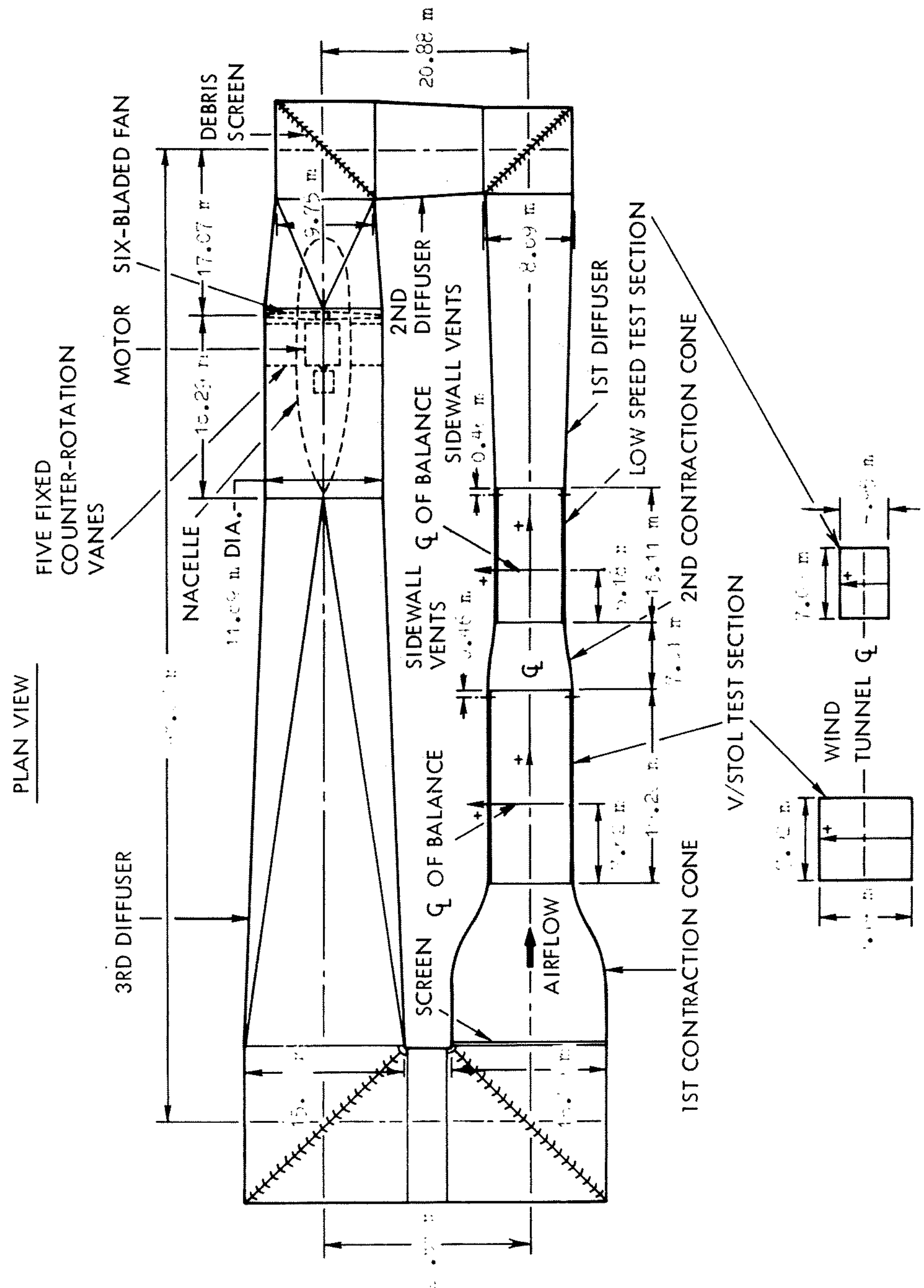

Figure 5-2. - General arrangement of low speed wind tunnel.

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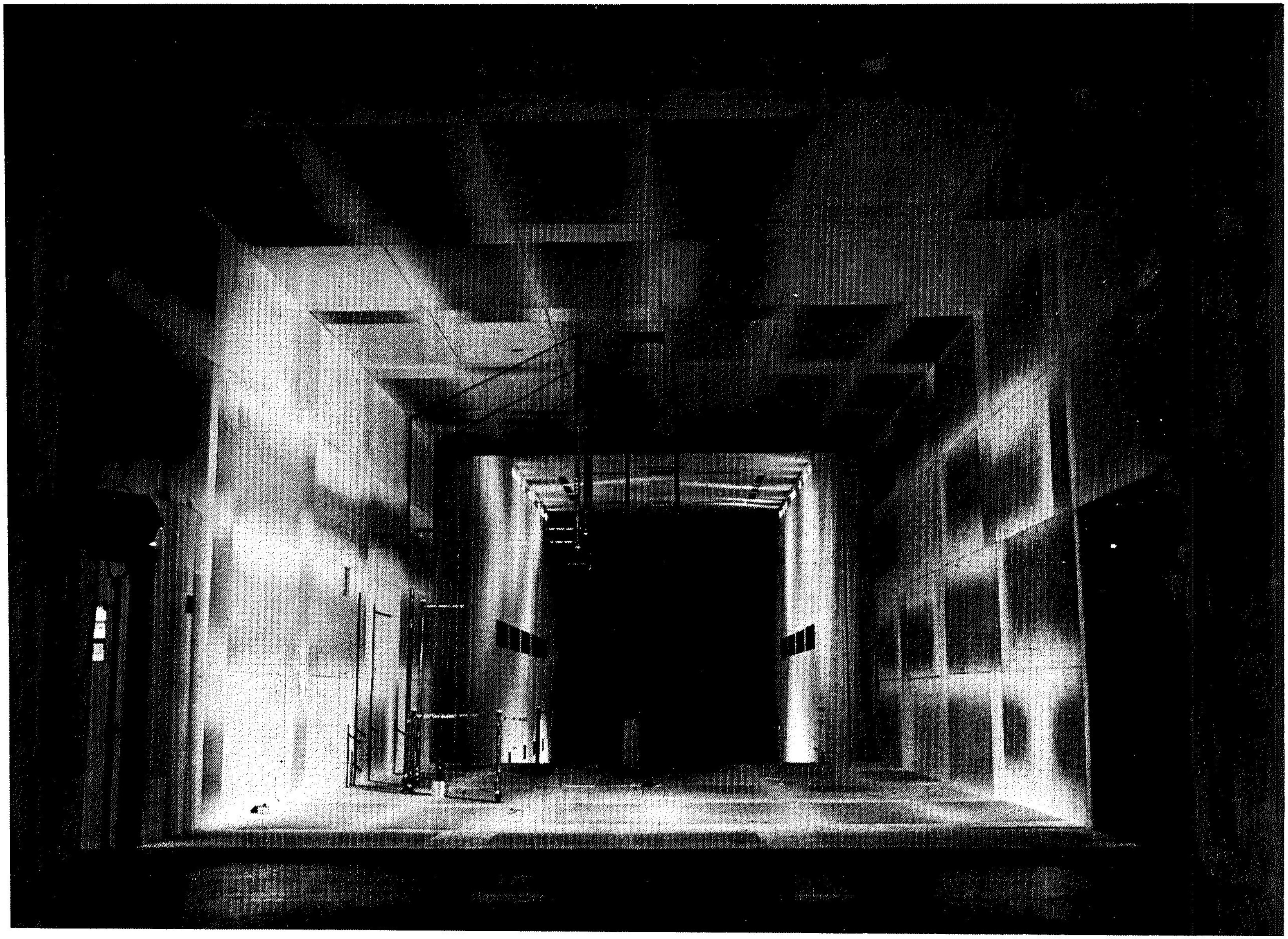


Figure 5-3.- Wind tunnel test section with microphones, nozzle, and foam lining installed.

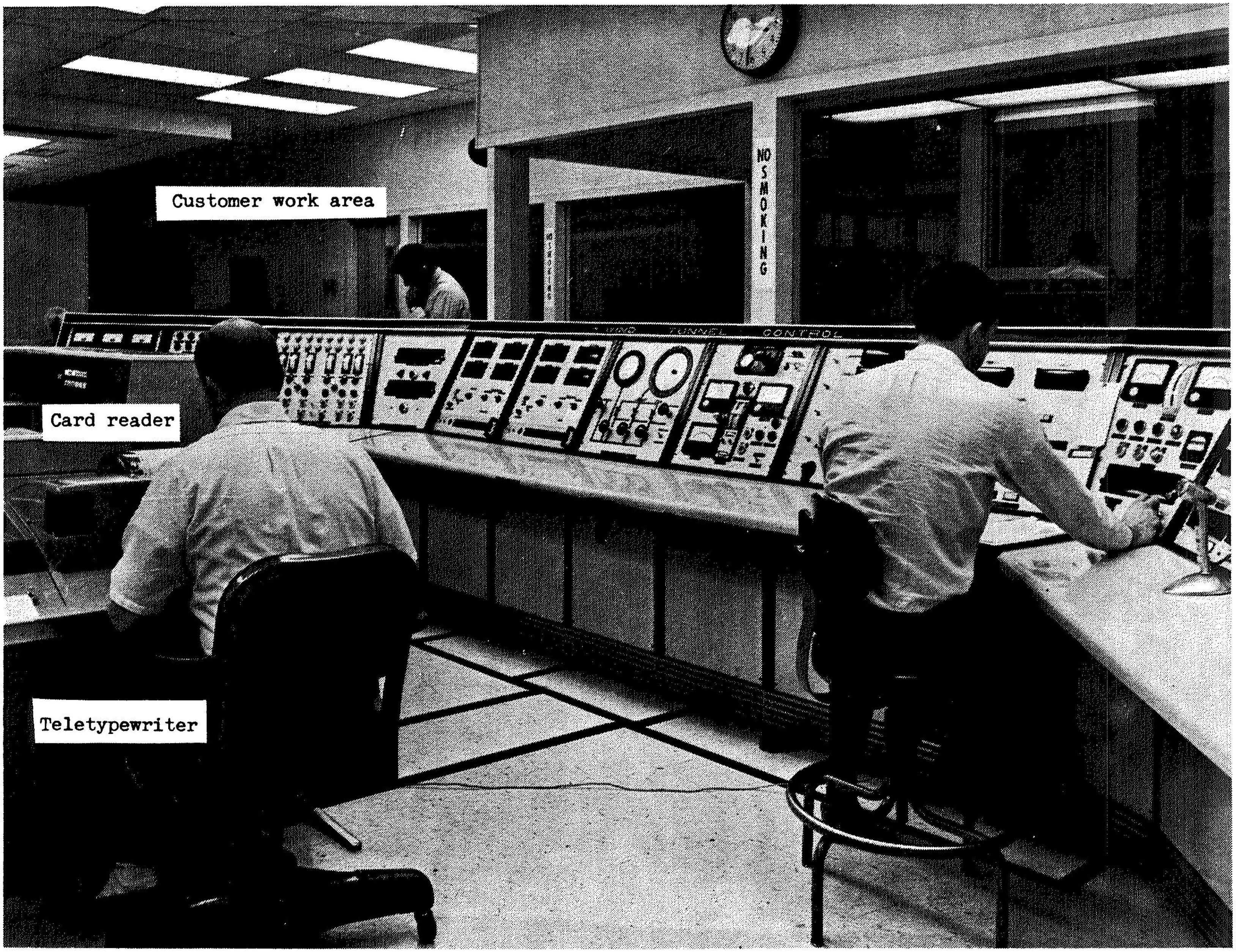


Figure 5-4.- Control console in wind tunnel control room.

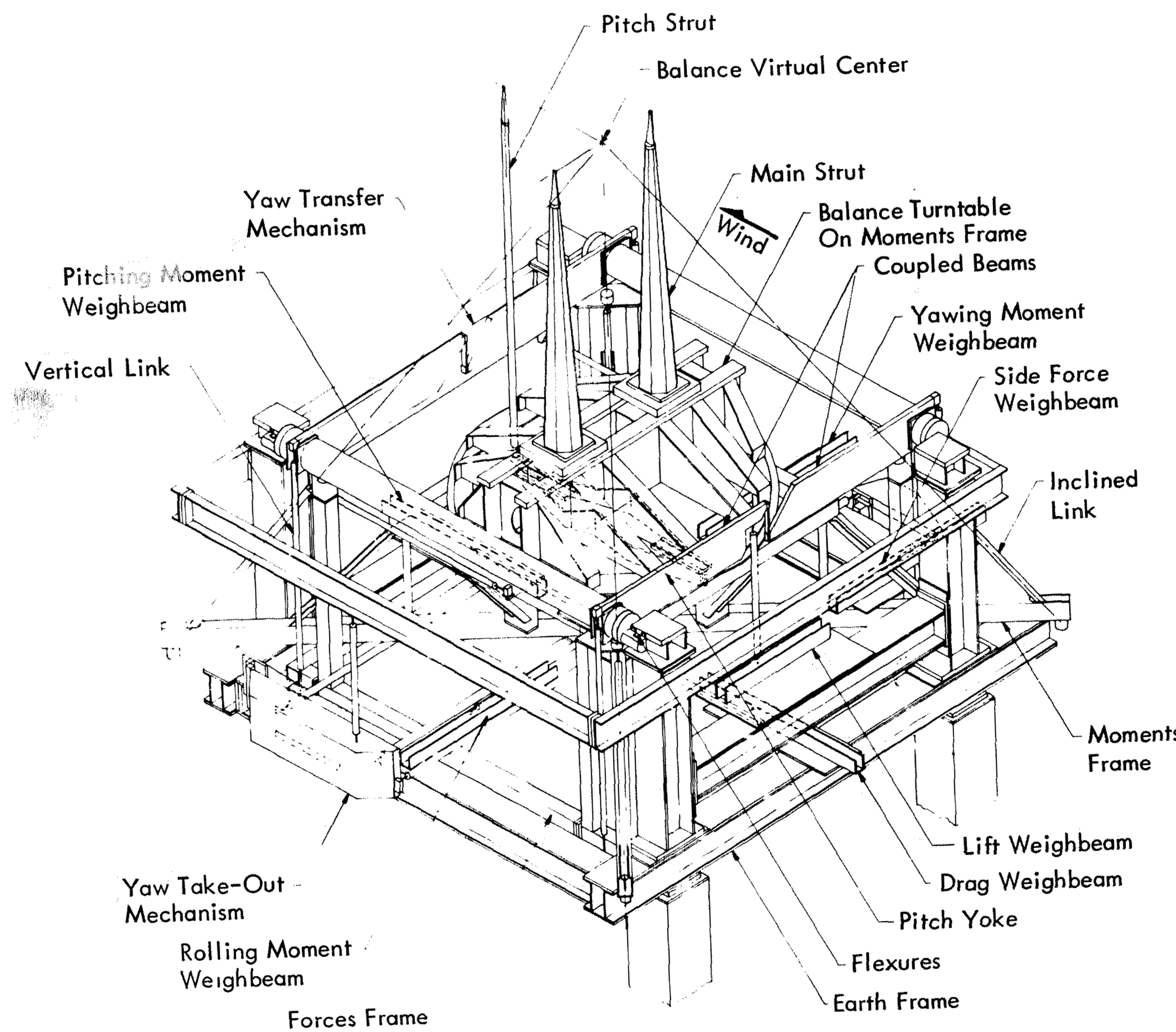


Figure 5-5.- Wind tunnel balance.

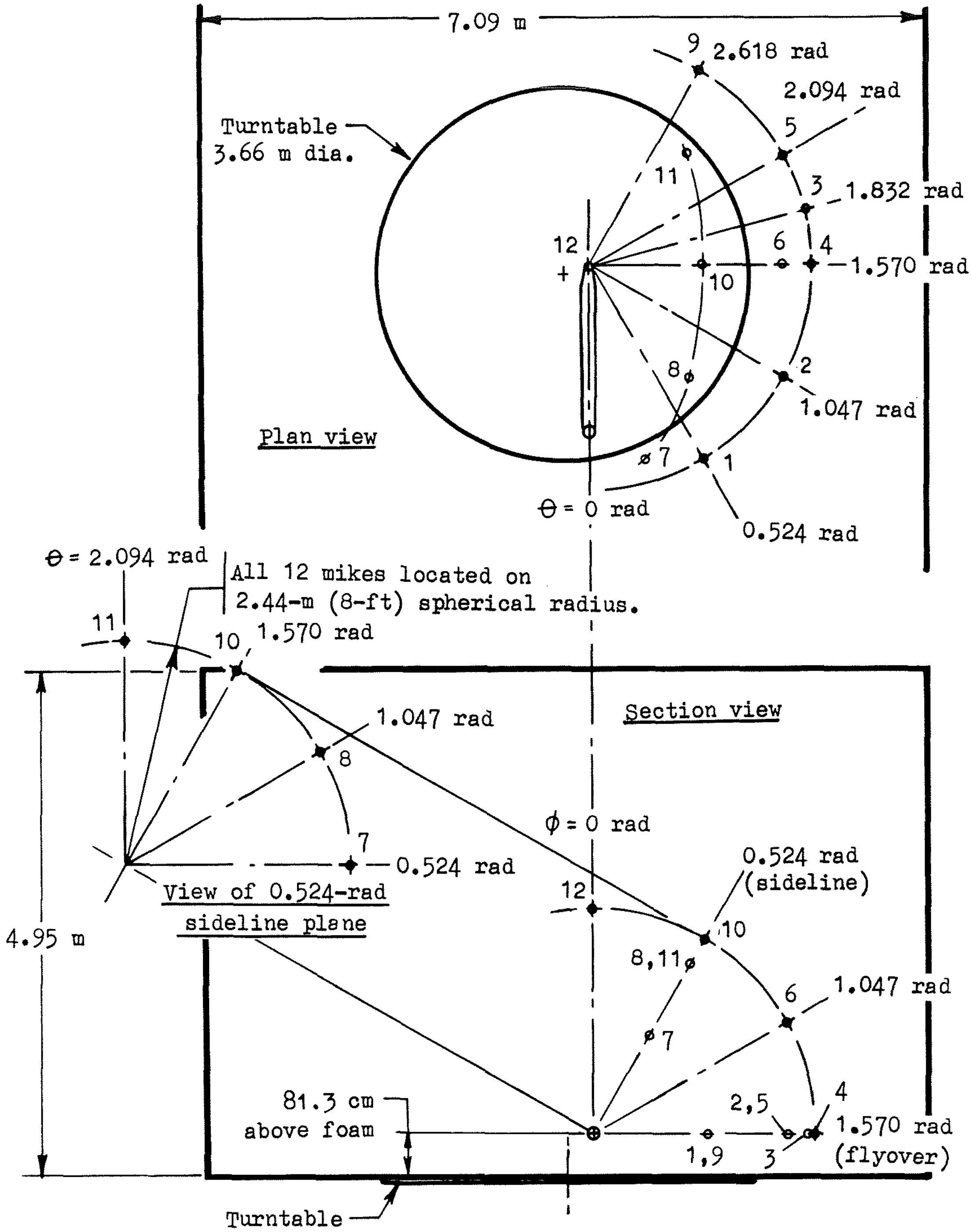


Figure 5-6.- Microphone numbers and locations in wind tunnel for nozzle-alone tests.

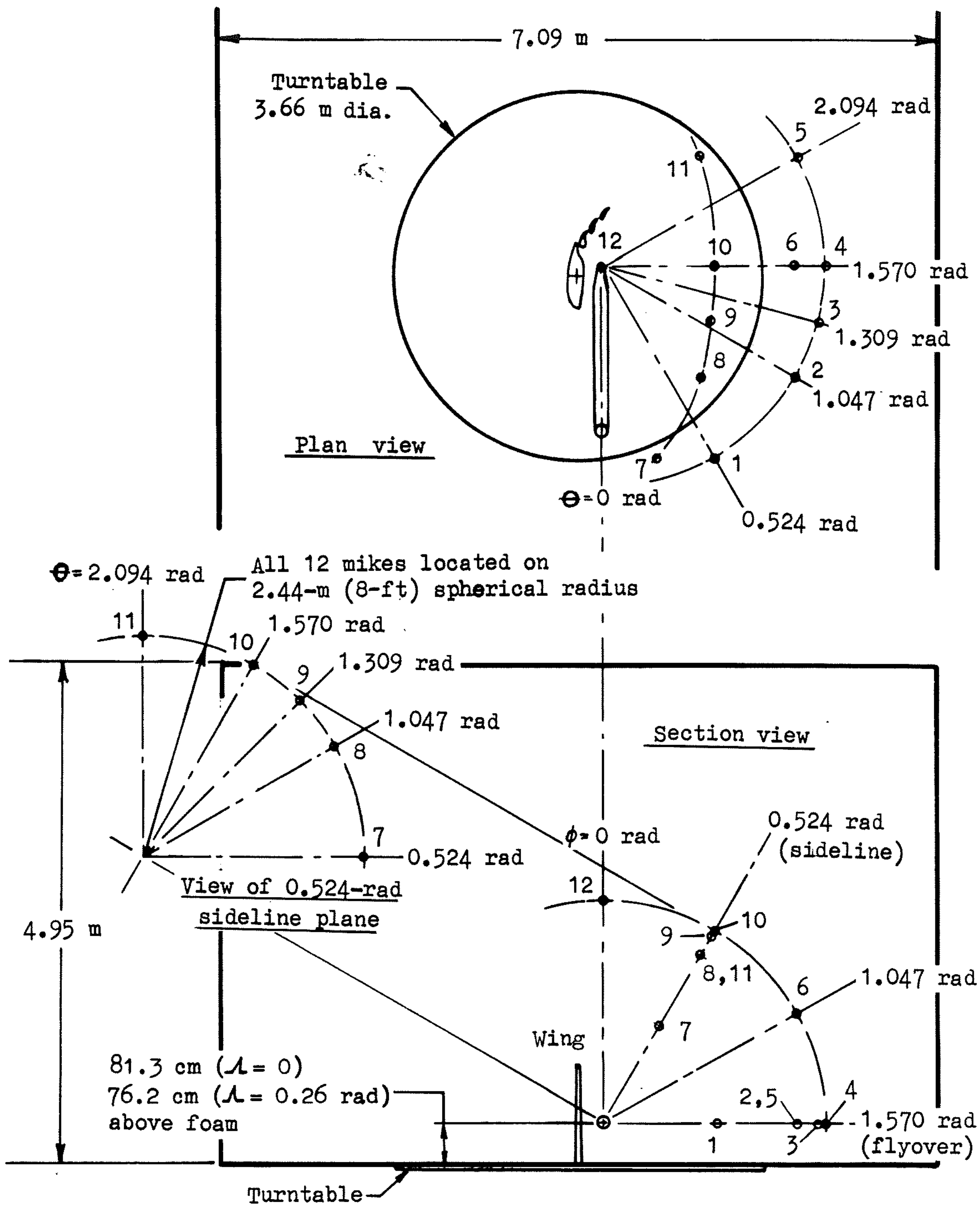


Figure 5-7.- Microphone numbers and locations in wind tunnel tests with airplane model installed.

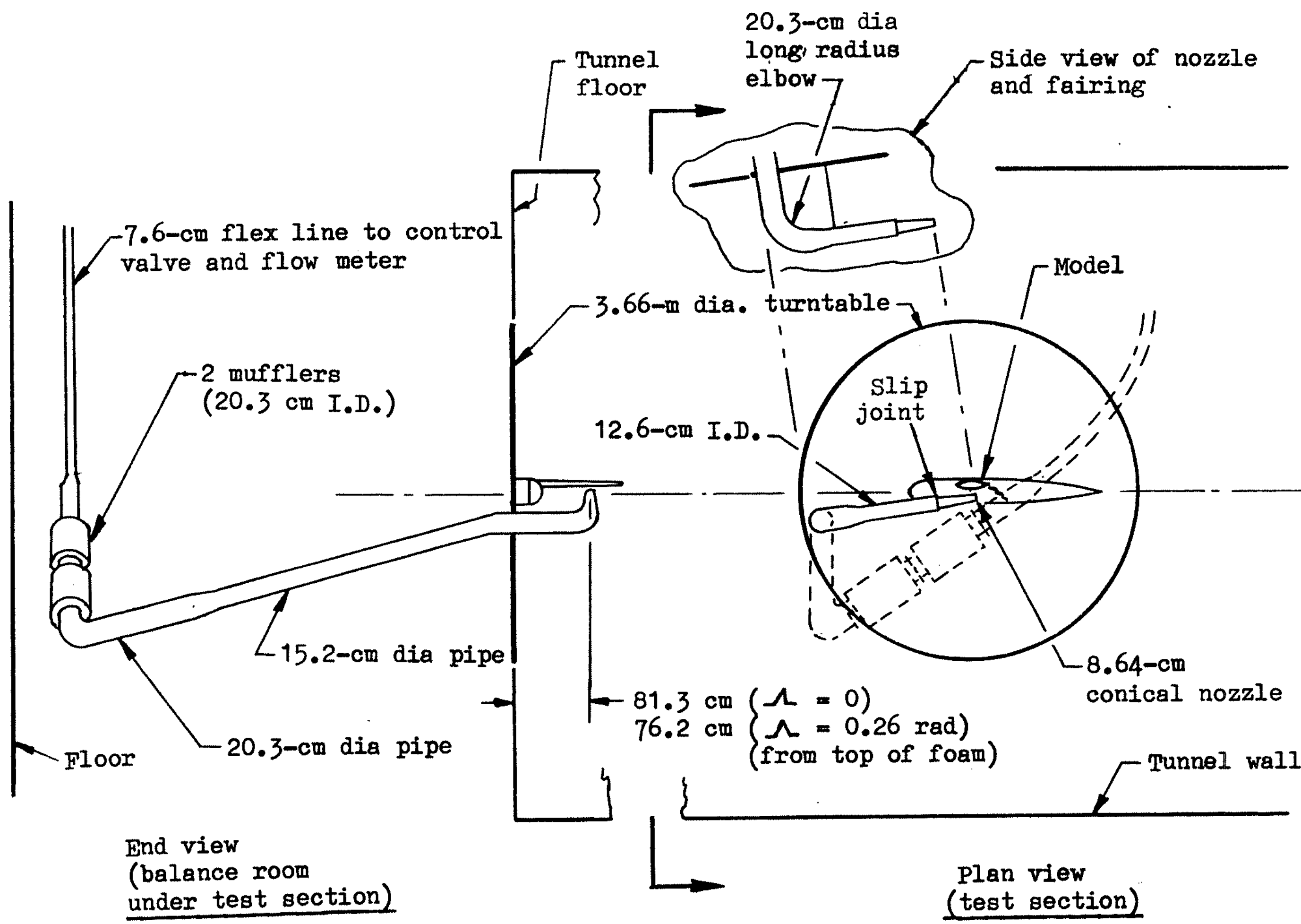


Figure 5-8.- Nozzle and air supply installed in wind tunnel.

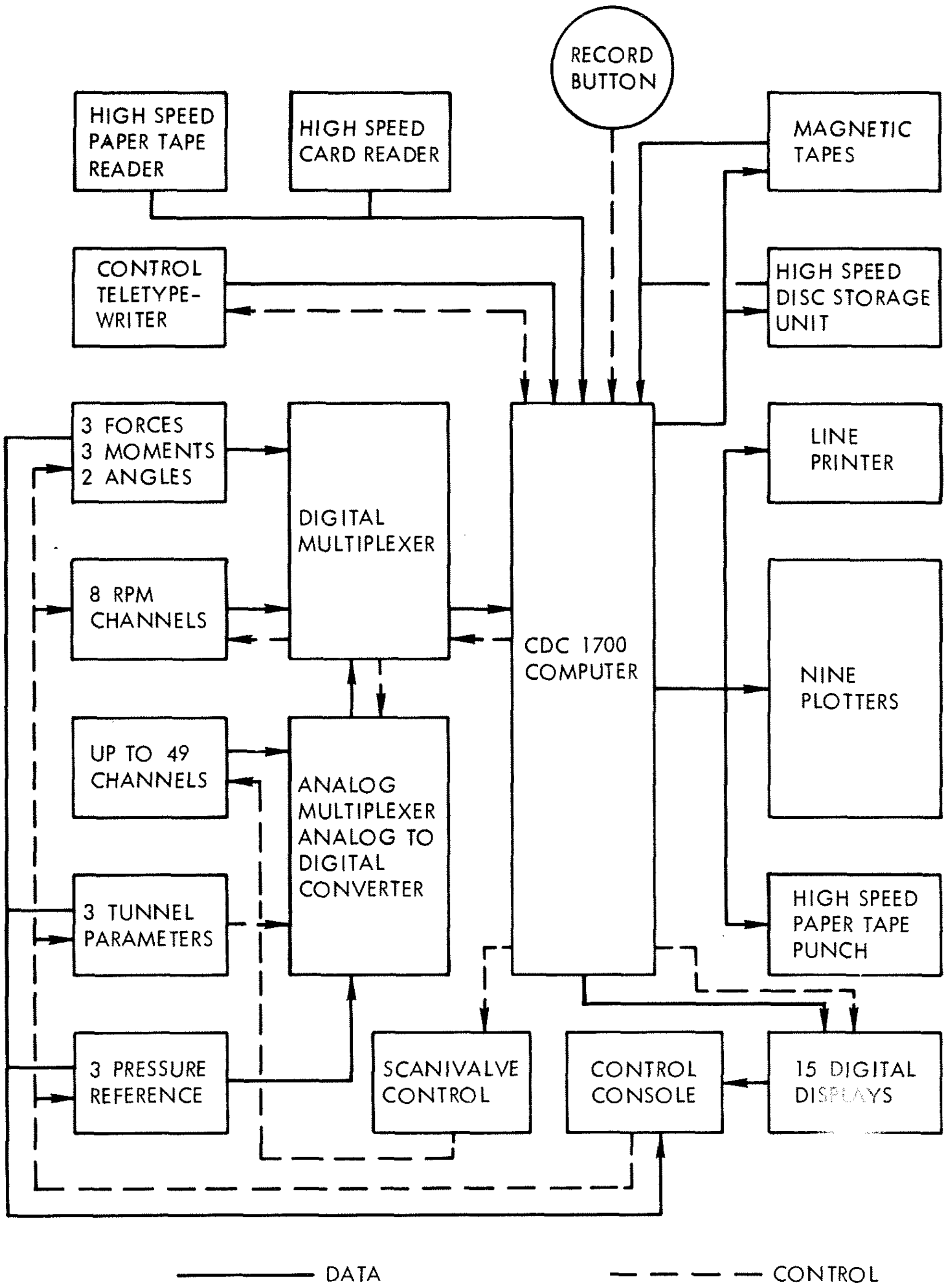


Figure 5-9. - Data system schematic.

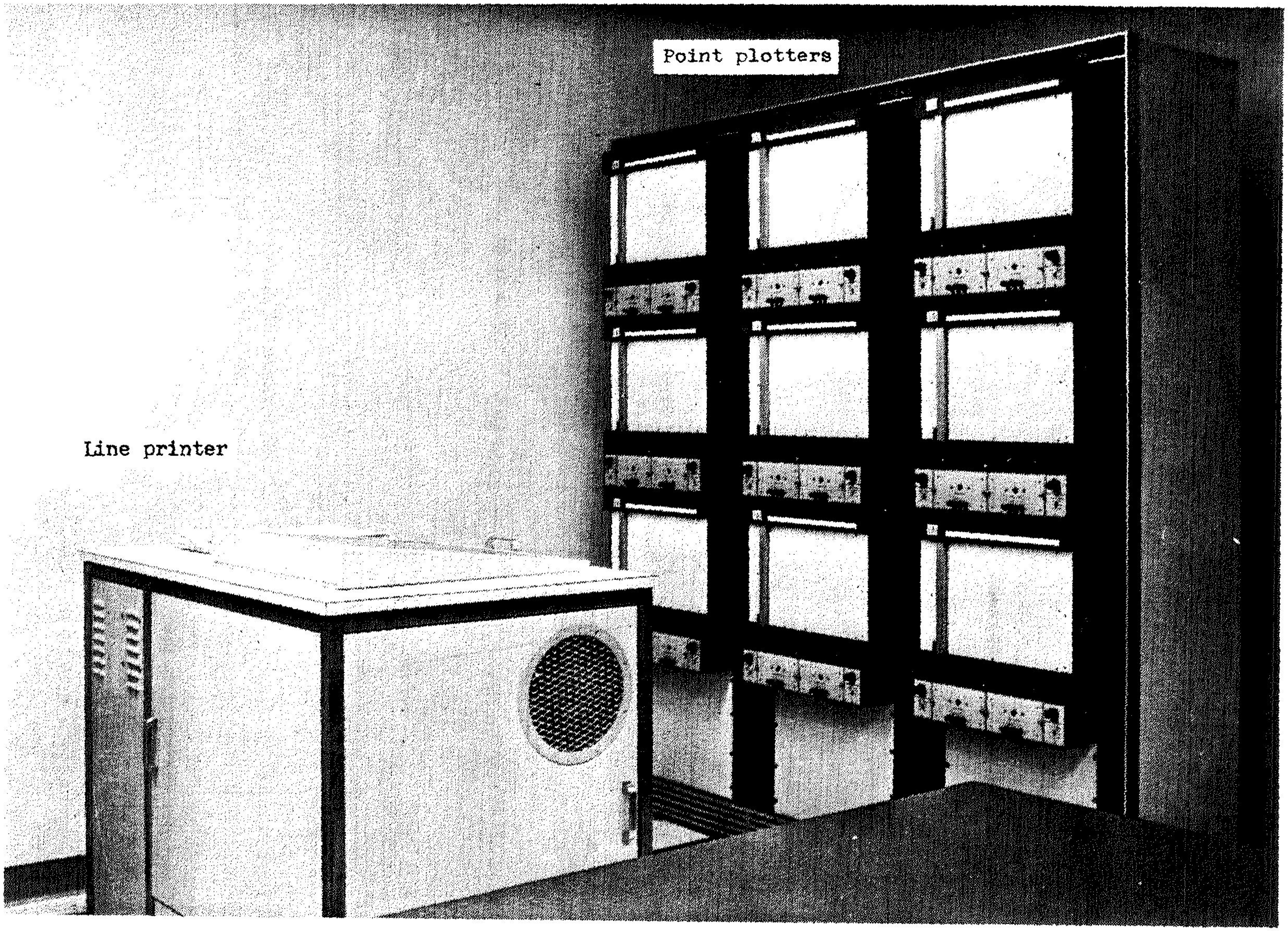


Figure 5-10.- Performance data recording equipment in wind tunnel control room.

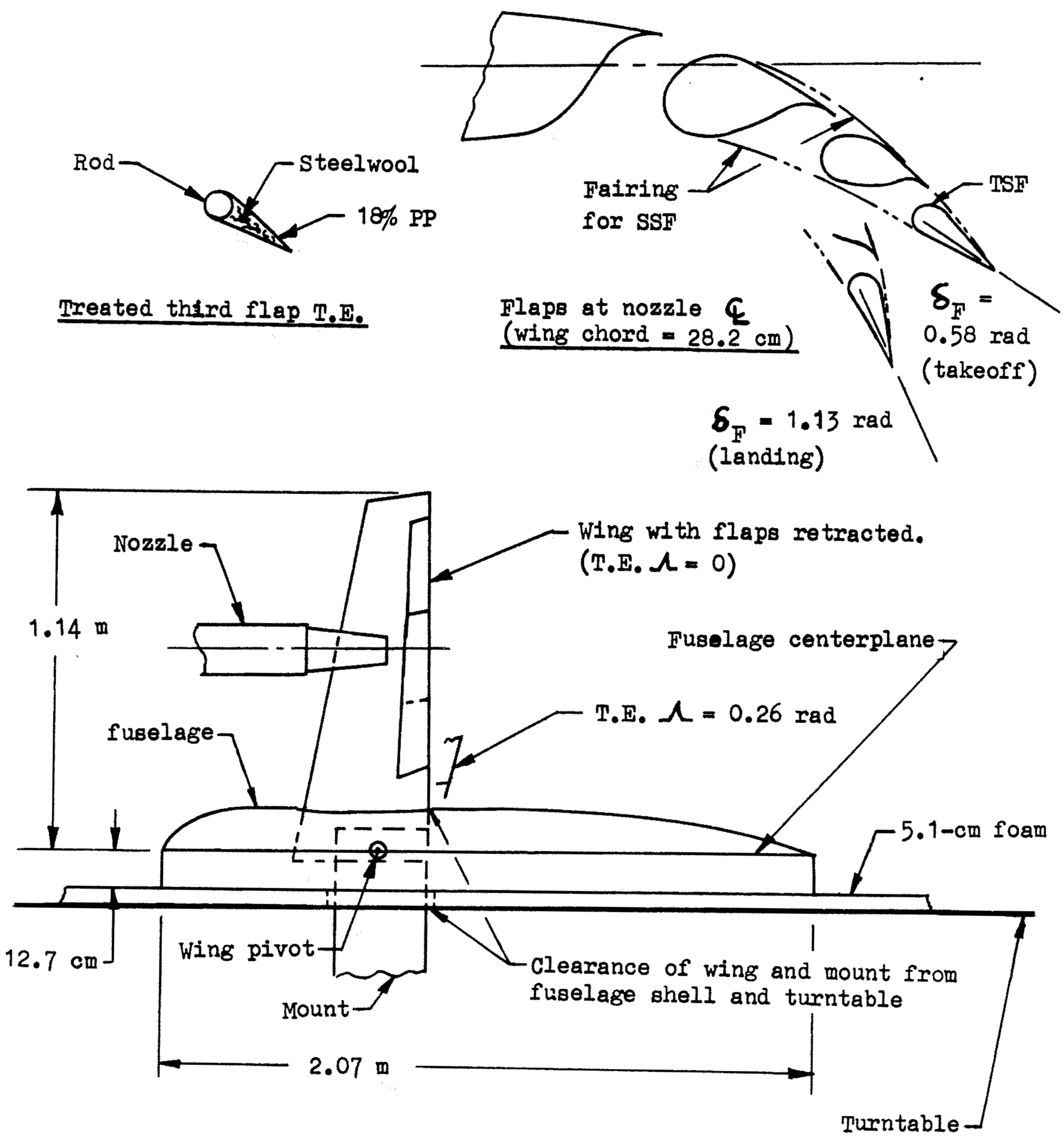


Figure 5-11.- Models of baseline B and variations tested in wind tunnel.

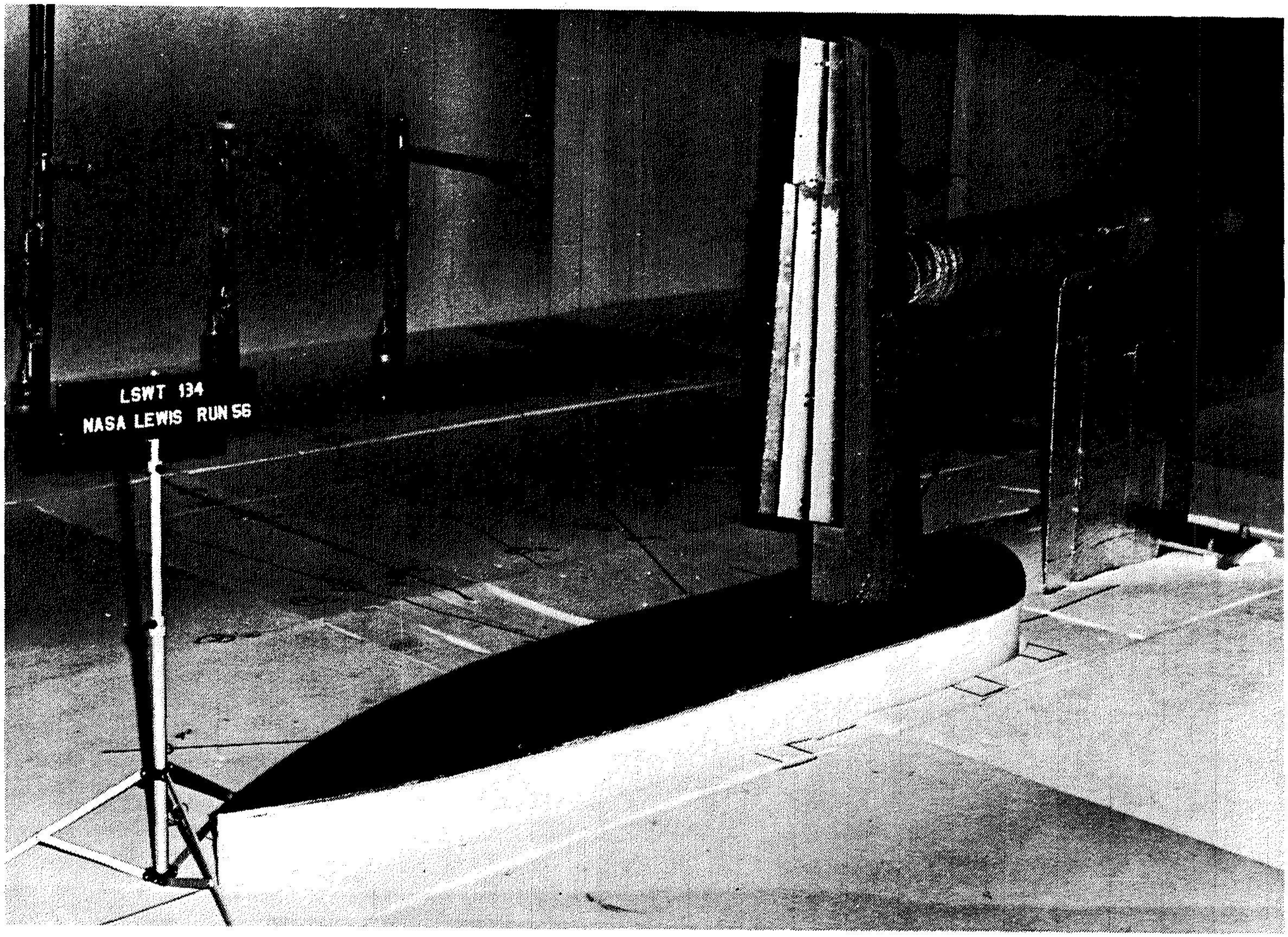


Figure 5-12.- Baseline B model installed in wind tunnel. Takeoff flaps, wing sweep = 0.

Figure 5-13.- Single-slotted flap model installed in wind tunnel. Landing flaps, wing sweep = 0.26 radians.

6. TREATMENT OF ACOUSTIC DATA

The methods used in developing the acoustic results presented in later sections are explained below.

Corrections

Source-power correction.- A correction for the effect of ambient temperature and pressure on the noise produced by a jet discharging into an atmosphere has been developed. The correction, referred to herein as the source-power correction, is distinct from the correction for sound attenuation over a distance as a function of atmospheric temperature and relative humidity. The source-power correction is calculated as follows:

$$\Delta dB = dB_{std} - dB_{amb} = 10 \log \left(\frac{T_{amb}}{T_{std}}\right)^3 \left(\frac{P_{std}}{P_{amb}}\right)^2$$

where T and P are absolute temperature and pressure.

The source-power correction was not included in the data reduction computer programs. It has been calculated for all test runs and has been incorporated in the results to the following extent (unless noted otherwise).

Corrected -	PNL's, PNLM's, directivity plots
Uncorrected -	Spectra

The corrections are listed in table 6-I and can be applied to the spectra if desired.

Scaling.- The tests were conducted at nominal scales of one-fifth for the static program and one-tenth for the wind tunnel program. The data reduction computer programs used the nominal scale values to calculate full-scale noise levels and frequencies. The actual scales (based on nozzle size, the most important factor in noise scaling) differed from the nominal, especially in the static tests, which used three different nozzles. If it is desired to compare full-scale results on the basis of the true full-scale nozzle size, to eliminate nozzle size effects on noise the following increments must be added to the data reduction program outputs.

Wind tunnel tests -	+0.2 dB
Static tests, 17.65-cm (6.95-in) conical nozzle	0.0 dB
Static tests, 20.19-cm (7.95-in) conical nozzle	-1.2 dB
Static tests, 191-cm^2 (29.6-in^2) fluted nozzle	+1.1 dB

The size correction has not been applied to basic results or to spectra, tabulated or plotted. The correction has been applied, however, in all comparisons.

Ground reflections.- It will be seen in the discussion of spectra that reflections from the concrete pad cause peaks and valleys in the low-frequency end of the static-test spectra. It is also shown that the perturbations can be calculated and corrected for. This correction has not been applied.

Ground reflections affect not only the details of the spectrum but also the absolute level of the spectrum and of the resulting OASPL and PNL. The data from the jet-alone tests of the 17.65-cm conical nozzle were used to develop an empirical correction for the effect of ground reflections on PNL, shown in figure 6-1. Figure 6-1 is based on the assumption that reflections to a microphone directly above the jet are dissipated by refraction in the jet and can be ignored. The figure shows the increment that must be added to the PNL at any other microphone angle to correct it to the noise level of the overhead microphone.

Except in section 11, Application to Aircraft, in which the effect of reflection is considered in determining the PNL of the reference aircraft under actual operating conditions, none of the PNL's or spectra presented herein have been corrected for ground reflection. Thus comparisons of PNL's or spectra at different elevation angles or fore-and-aft angles include the increment due to the ground reflection difference as well as the increment due to the directivity pattern of the configuration. Comparisons at the same angular coordinates are considered to be unaffected by reflection.

Presentations

The basic acoustic data elements acquired in a typical run sequence of

the static test program are defined in table 6-II. The 237 static-test run sequences produced about 250,000 data elements and the wind tunnel program produced about 70,000. To be intelligible this mass of data must be reduced to concise form and presented in tables and curves. Reduction and presentation have three objectives:

- Comparison of configurations
- Establishment of accuracy and validity of data, including winnowing out of wild points
- Determination of operative acoustic mechanisms

Many presentations provide a mixture of the three types of information.

The presentations used in this report are described below in the context of the static test program. The wind tunnel data presentations are similar, with some differences due the different nature of the tests. It is important to understand the difference between the types of presentations, as they give slightly different results in what appear to be the same circumstances.

PNLM.- Configurations are usually compared in this report on the basis of maximum perceived noise level (PNLM), a concise measure that relates directly to the objective of the program - the reduction of maximum sideline PNL. The derivation of PNLM is shown schematically in figure 6-2 and is explained below.

- The signal from each microphone was converted to PNL at standard day (15°C, 70% relative humidity) for four TF34 engines at 152.4-m (500-ft) sideline, or 152.4-m flyover for tests with the microphone arch in the flyover plane. No correction was applied for shielding by intervening nacelles or fuselage.

- PNLM is the maximum sideline (or flyover) PNL exhibited by any microphone. The microphone with the highest PNL depends on the directivity pattern of the configuration. Due to the increase in distance to the sideline or ground at angles toward the nose or tail of the aircraft, maximum PNL's always occurred on the central microphones.

- Most configurations were tested at four V_j's, and a few at more than four. In all of these cases PNLM was curve-fitted against log V_j by least squares. PNLM was plotted against log V_j if fewer than four V_j's were tested.

- PNLM was read from the fitted or plotted curve at 150 and 250 m/s.

Static test chronology.- Table 6-III summarizes the perceived noise results obtained in the static tests. Heavy lines indicate the end of each day of testing. All configurations were tested at flyover, since configuration effects are stronger in the flyover plane; in addition, flyover is important in the community noise problem, and flyover data are often directly comparable to results reported in the literature. Extensive tests were also conducted at 0.524 rad (30°) below the wing, the approximate angle for maximum sideline noise.

Table 6-III lists PNLM at 150 and 250 m/s jet velocity, read from the fitted or plotted curve; the exponent of V_j; the scatter of the PNLM's (the average absolute difference between the measured and curve-fitted values) if the curve-fit was used; and the microphone number of the maximum-PNL microphone. The table includes only the two microphone arch angles that were used in most of the tests - 1.572 and 0.524 rad (90° and 30°) below the wing. Other angles were tested on only a few configurations; the results are presented in the discussion of directivity.

Spectrum tables.- PNLM is the most concise descriptor of the noise of a configuration. At the other end of the scale, providing the most complete acoustic data, are the tabulated spectra of appendix A, which list curve-fitted SPL's for five one-third-octave bands an octave apart (315, 630, 1250, 2500, and 5000 Hz), and curve-fitted OASPL, for all microphones for every configuration tested in the static program. As is indicated schematically in figure 6-3, the SPL's and OASPL's were curve-fitted against log V_j by least squares and the curve values at 250 m/s are listed. The tables also list the V_j exponent and the average scatter of the data points about the fitted line.

Spectrum and directivity plots.- Conventional spectrum plots and directivity plots are also presented in section 7, Static Test Acoustic Results, and section 9, Wind Tunnel Acoustic Results, to define noise characteristics. The spectrum plots show SPL vs center frequency, for the 24 one-third-octave bands. In model-scale spectrum plots, the frequency scale is as recorded and the SPL's are standard-day values at the measurement radius of 6.15 m (20 ft). In full-scale spectrum plots, the frequencies are reduced by the nominal scale factor (one-fifth for the static tests, one-tenth for the wind tunnel tests) and the SPL's are full-scale four-engine values adjusted for distance in accordance with the angle of the selected microphone. Unless noted, spectrum plots are not source-power-corrected. Source-power corrections for all run sequences are listed in table 6-I and can be applied if desired.

Directivity plots show full-scale four-engine sideline or flyover PNL vs angle from the nose of the aircraft. All directivity plots are source-power-corrected.

Smoothed PNLM.- As a means of reducing the scatter of the PNLM's about the fitted curve, the directivity data for each V_j in the test sequence of a given configuration were collapsed to a single directivity characteristic and smoothed. The procedure is illustrated in figures 6-4(a) and 6-4(b).

Figure 6-4(a) shows a typical set of directivity plots. To define a single smoothed characteristic, these data were plotted separately, on transparent paper, and moved up and down until they appeared by eye to be superposed, as in figure 6-4(b). A single curve was then drawn through the full set of points and transferred back to the individual plots, from which the values of the smoothed PNLM's were then read. This procedure draws on more of the available information than does the use of unsmoothed PNLM's.

Superposing the plots as described above assumes that the same V_j exponent applies at all microphone angles. This assumption ignores underlying acoustic mechanisms but gave good superposition, with no appearance of bias due to V_j. It would have been informative to have displaced all

plots in accordance with the same V_j exponent (for a given run sequence) but this was not feasible.

Comparing smoothed and unsmoothed PNLM curve-fits for 26 arbitrarily chosen configurations showed that smoothing had little effect. On the average, scatter was reduced from 0.16 to 0.13 PNdB, V_j exponent was reduced by 0.05, and PNLM was reduced by 0.19 PNdB at 195 m/s. The reduction in PNLM comes about as follows: smoothing rejects PNL peaks that lie above the smoothed curves; the crests of the smoothed curves, however, are usually flat enough to span several microphones, at least one of which normally shows a PNL equal to the smoothed peak; thus there is little tendency for smoothing to increase PNLM.

None of the smoothing effects discussed above are significant. It is concluded that unsmoothed PNLM's describe maximum noise levels about as well as smoothed PNLM's, although the latter make use of more of the total available data. Only unsmoothed PNLM's are presented herein.

Statistical Treatments

Statistical treatments of the static test data are described below. The wind tunnel data cannot be similarly treated. The influence of wind speed precludes the use of a curve-fit of PNL vs V_j, and the wind tunnel program, due to time and cost constraints, did not include repeat runs of the same configuration.

Variability within a run sequence.- The variability of the noise data from any microphone during a given run sequence is excellent. This can be illustrated in three ways:

Back-to-back runs. On several occasions runs were repeated without shutting down. An example of the results is shown in figure 6-5. Both sets of data have been corrected to a jet velocity of exactly 195 m/s. The variability from run to run is indicated by the standard error, s, of the differences at the various microphones. In this case the standard error is 0.26 dB. Standard error is calculated as:

$$s = \sqrt{\frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n-1}}$$

where x is the offset from the mean and n is the number of values.

Superposition. As is shown in figure 6-4(b), tight groups of points are typically obtained when runs at four V_j's are superposed. Except at the three aft microphones, where noise levels are inherently more variable, the standard error of the four PNL's at a given microphone, averaged over five randomly-selected directivity plots, turns out to be 0.26 PNdB, the same value found in the back-to-back case.

Curve-fits at specific frequencies. Appendix A shows that variability over the V_j range is even less when each microphone is allowed to seek its own V_j exponent. The scatter of OASPL, and thus also of PNL, about the fitted curve is typically $\pm$ 0.1-0.2 dB; the corresponding standard error is probably of the order of 0.1 dB or less.

Variability between run sequences.- Variability is slightly greater when the data from run sequences on the same configuration tested at various times in the program are compared. Figure 6-6 plots the PNLM's, at 150 and 250 m/s jet velocity and at 1.572 and 0.524 rad (90° and 30°) below the wing, of all configurations with a significant number of repeated tests. The standard error is 0.31 PNdB. (The noise levels of the configurations shown in figure 6-6 are discussed in section 7, Static Test Acoustic Results. Configurations not tested repeatedly can be assumed to have similar standard errors.

Confidence intervals.- Using the standard error just obtained, approximately 0.3 PNdB, confidence intervals applicable to the measured PNLM difference between two configurations, X and Y, can be calculated for any desired confidence level and for any combination of the number of repetitive tests of X and Y. Figure 6-7 illustrates the procedure. Confidence intervals are listed below for a 90% confidence level.

Confidence Intervals, PNdB

90% Confidence, s = 0.3 PNdB

No. of Tests of Config. X	Number of Tests of Configuration Y: 1	2	3	4	5	6	7	8	9	10
1	±1.0									
2	0.8	0.7								
3	0.8	0.6	0.6							
4	0.7	0.6	0.5	0.5						
5	0.7	0.6	0.5	0.5	0.4					
6	0.7	0.6	0.5	0.4	0.4	0.4				
7	0.7	0.5	0.5	0.4	0.4	0.4	0.4			
8	0.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4		
9	0.7	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	
10	0.6	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3

The table shows, for instance, that if two configurations, each tested once, are compared, one can be 90% confident that the true difference in PNdB is within ± 1.0 PNdB of the measured difference. Although baselines were tested repeatedly, each treatment was usually tested but once on a given baseline; in general, therefore, an uncertainty band of ± 0.7-1.0 PNdB must be applied to measured treatment effects to insure 90% confidence in the result. Thus the measured effects of passive treatments, usually less than 1 PNdB, are too small to be reliably evaluated from a single test of a treatment. The confidence interval can be reduced to ± 0.4-0.5 PNdB, however, by grouping similar treatments, as is done later, in the discussion of flap treatment effects in section 7. The assessment of passive-treatment effects without repeated testing would require a step improvement in the state of the acoustic instrumentation art.

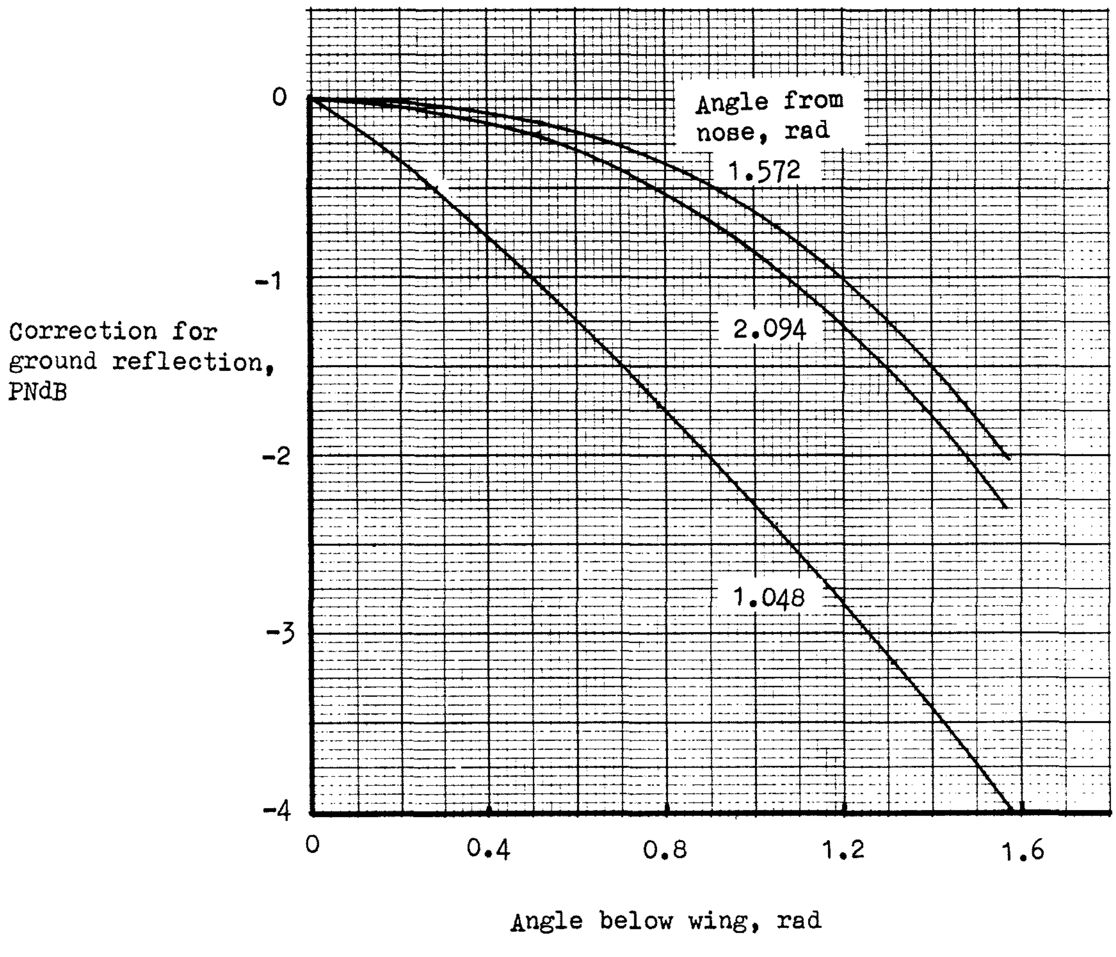


Figure 6-1.- Correction for ground reflection.

Microphone no. (See fig. 4-7 for angle)	1				2 11	
V_j, m/s	120	145	170	195		
SPL's for 24 one-third-octave bands	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$		
OASPL's	OASPL	OASPL	OASPL	OASPL		
PNL's	PNL	PNL	PNL	PNL		

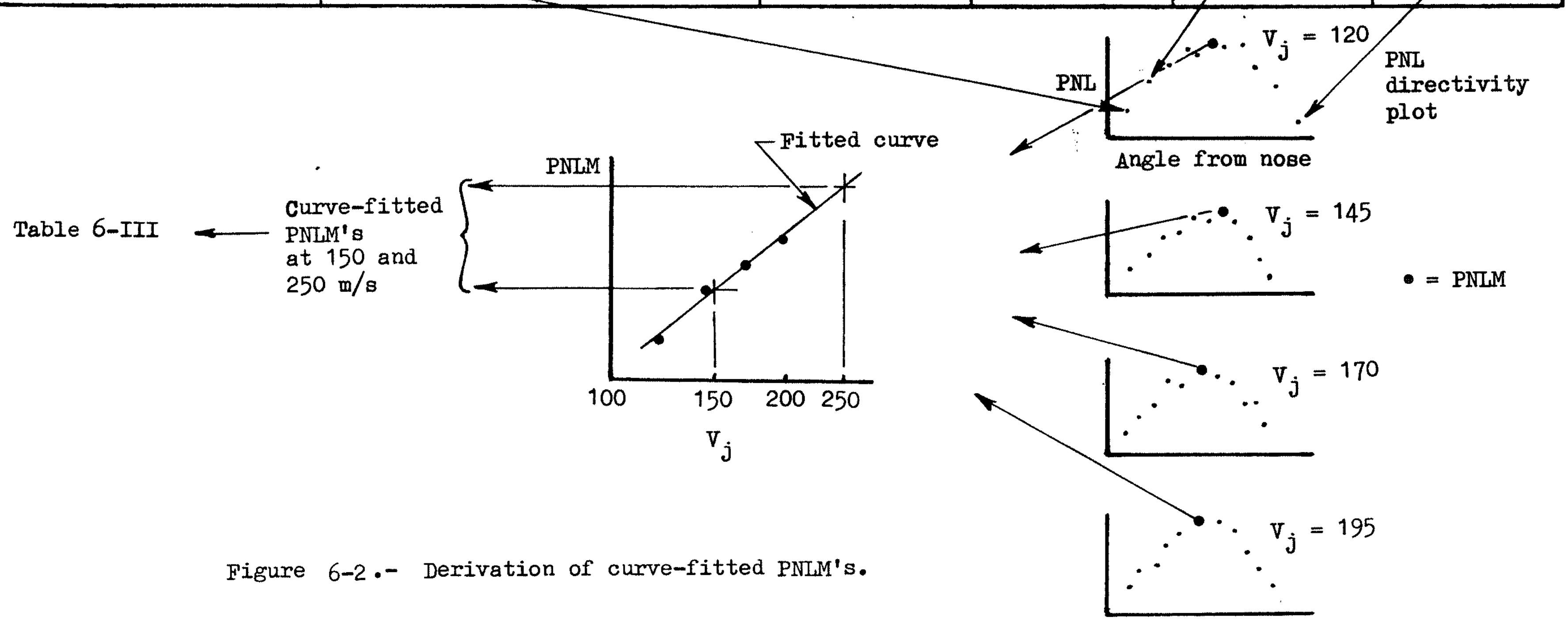


Figure 6-2.- Derivation of curve-fitted PNLM's.

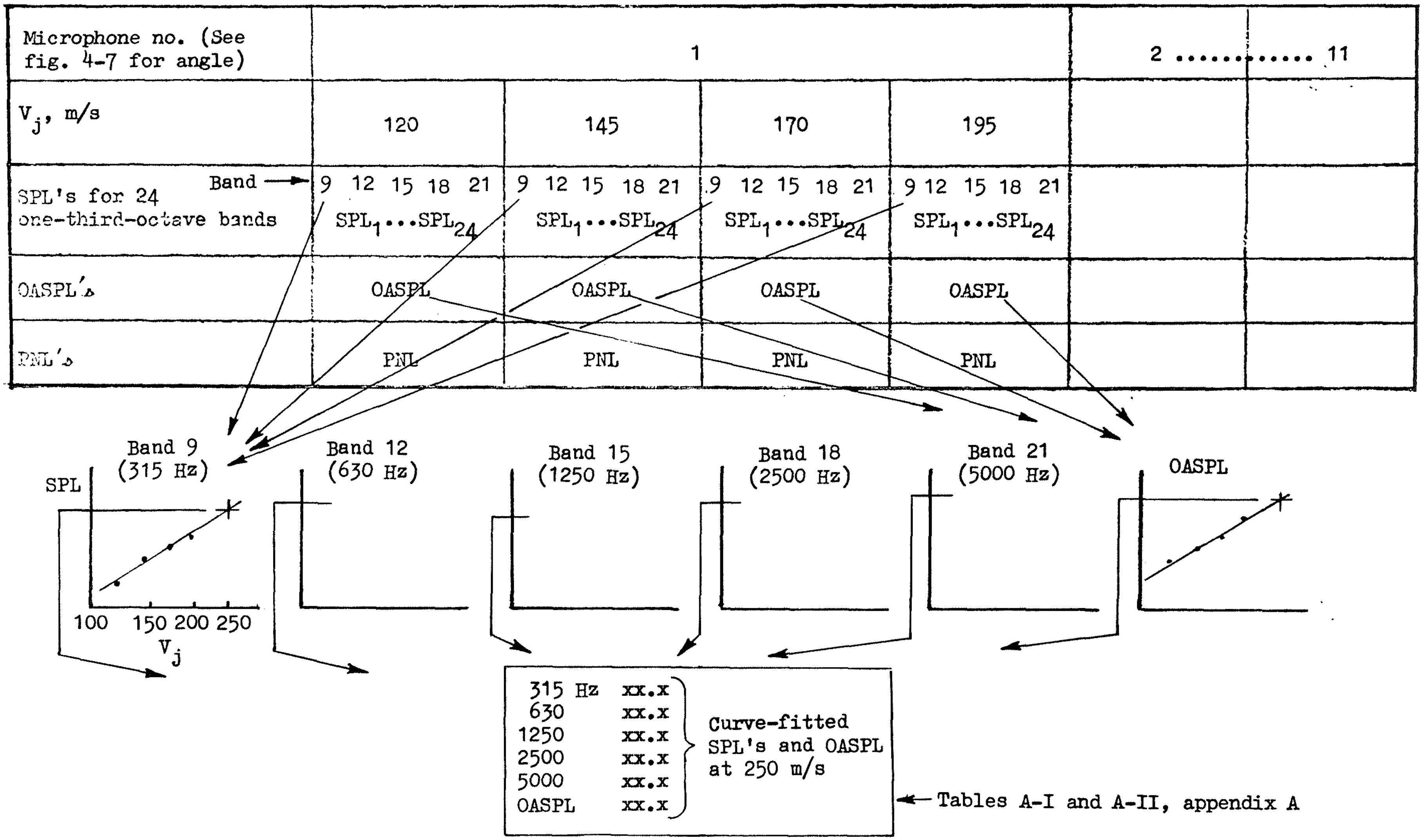
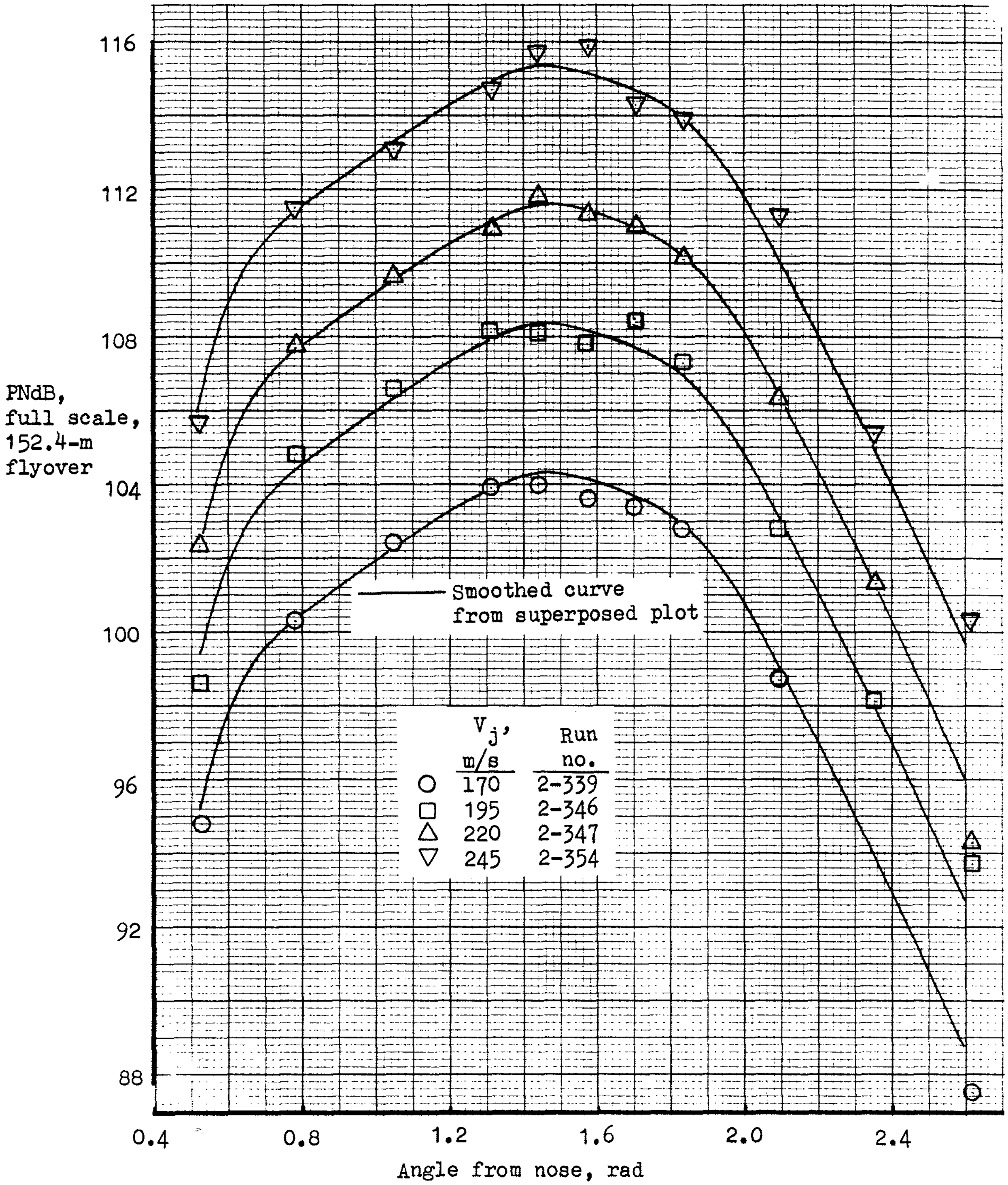
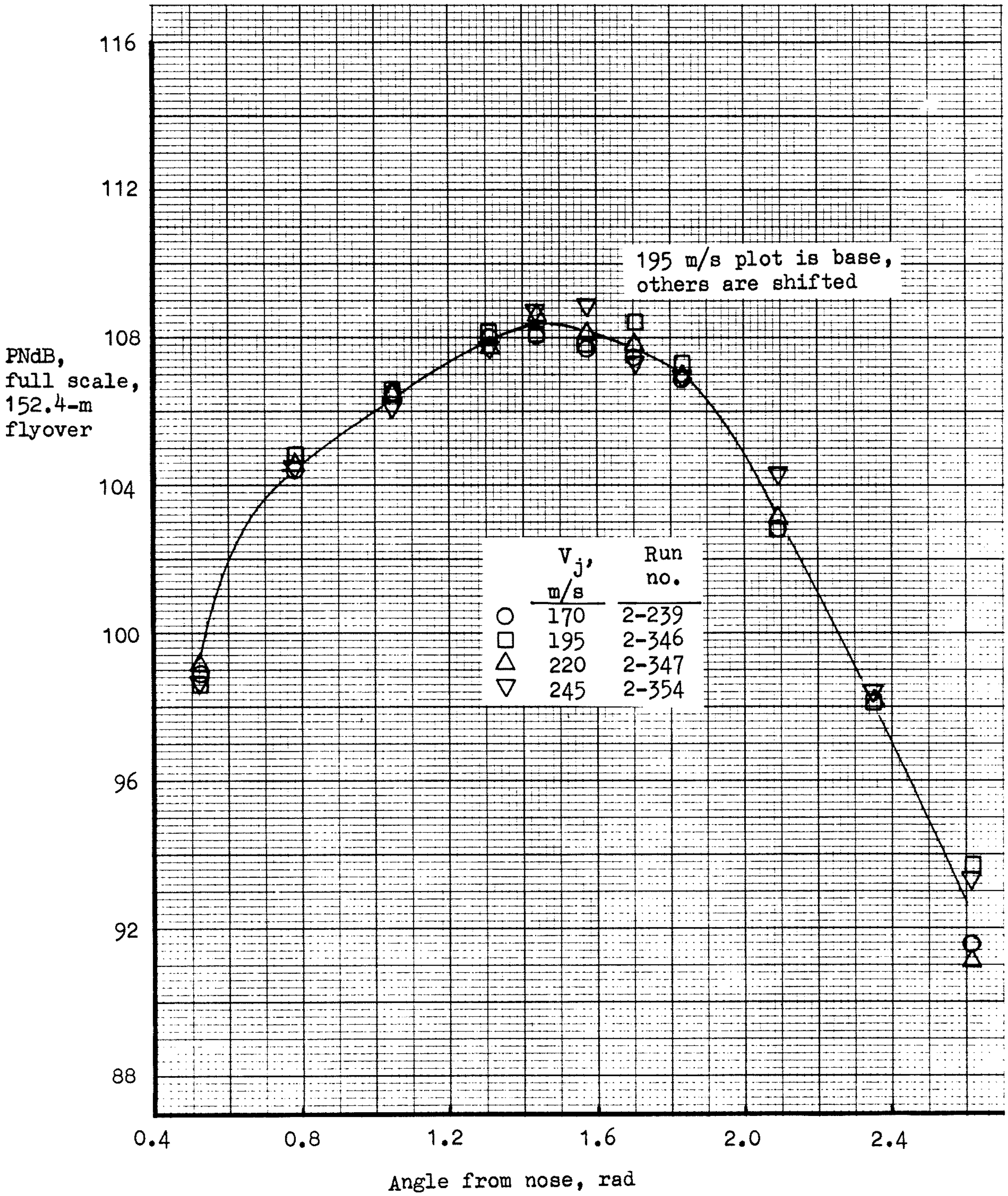


Figure 6-3.- Derivation of tables A-I and A-II, appendix A.



(a) Individual directivity plots.

Figure 6-4.- Application of smoothing to directivity plots.



(b) Superposed directivity plots.

Figure 6-4 .- Concluded

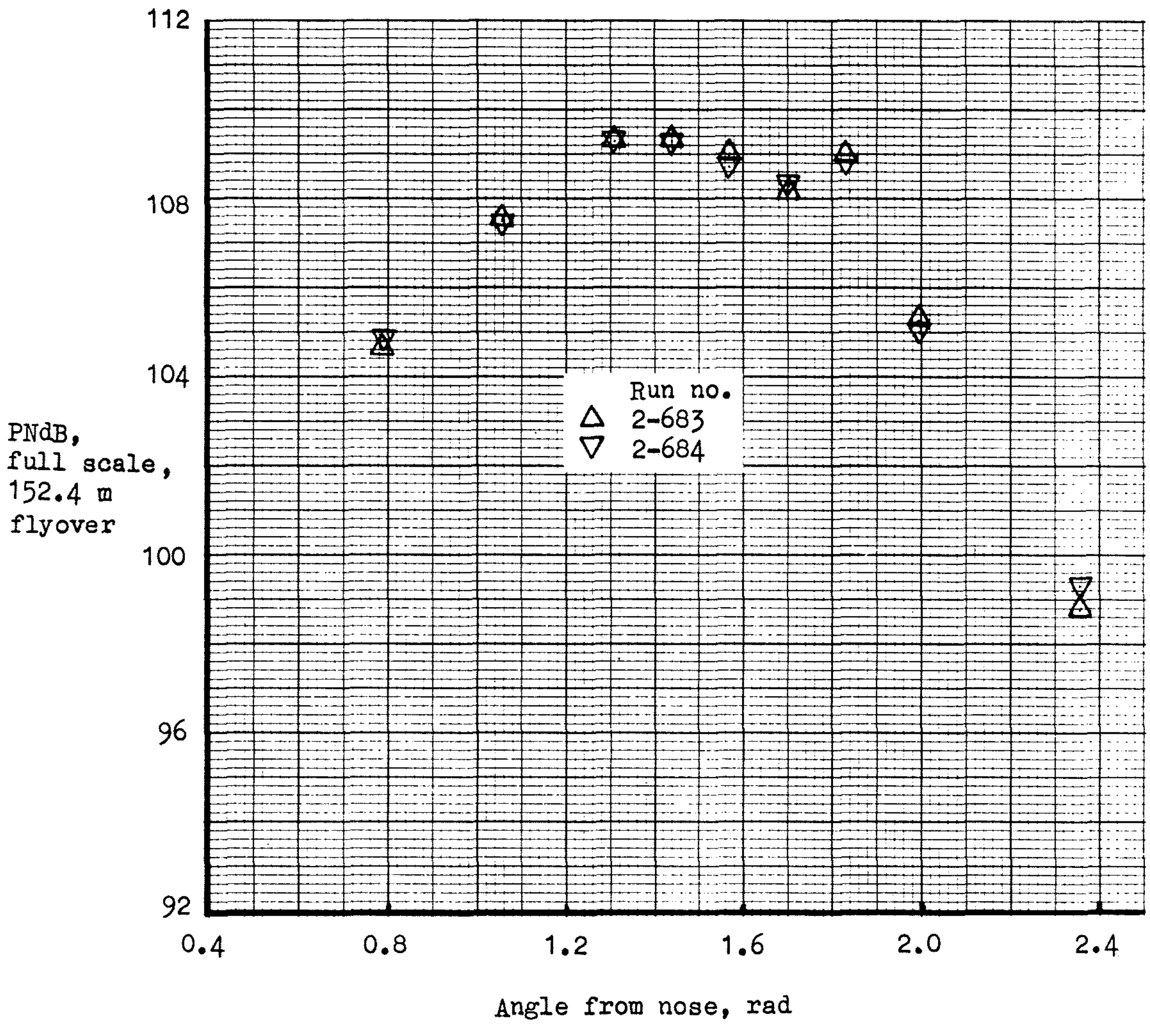


Figure 6-5.- PNL repeatability in back-to-back runs.
V_j = 195.0 m/s.

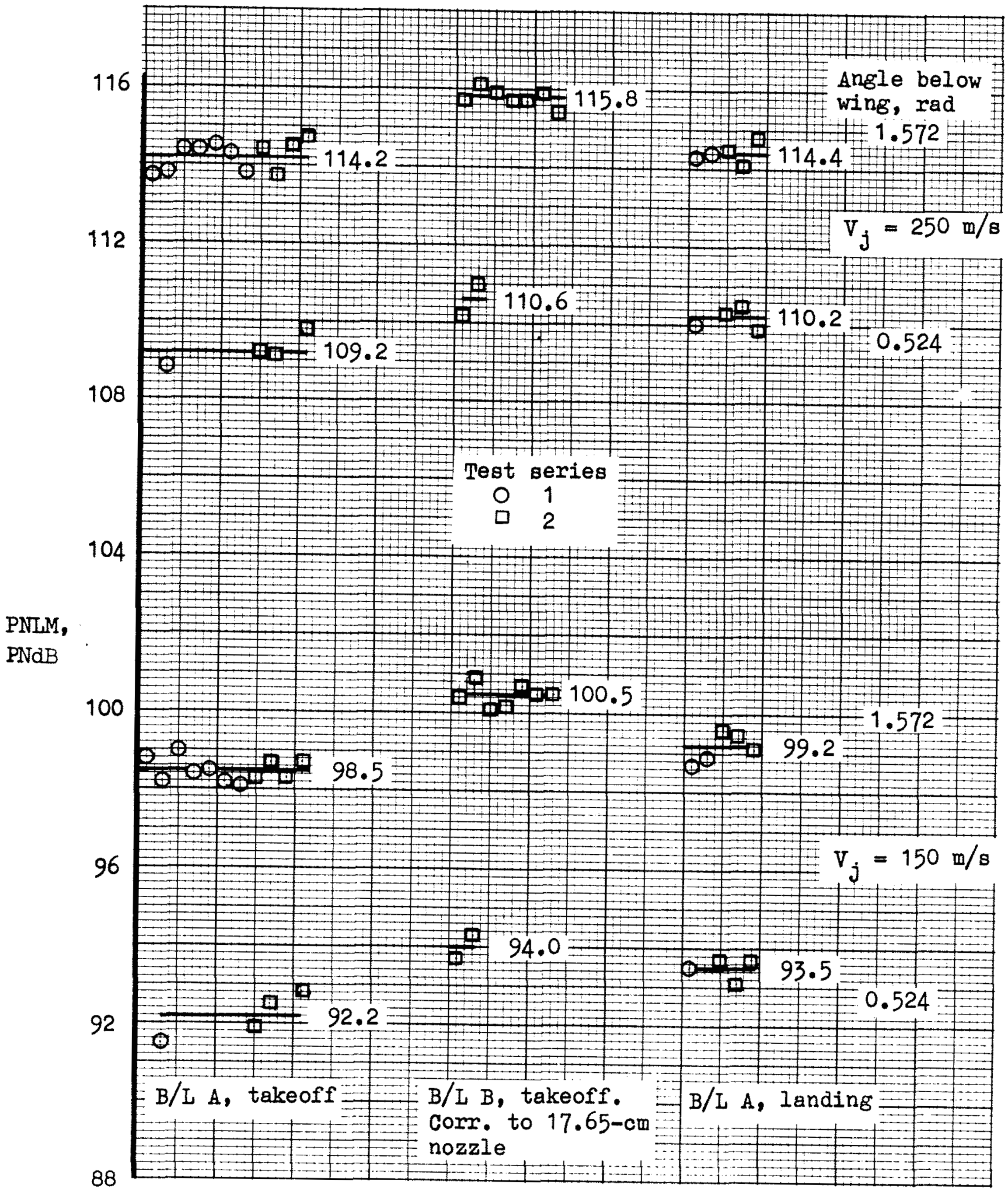


Figure 6-6.- Baseline PNLM comparisons and long-term repeatability.

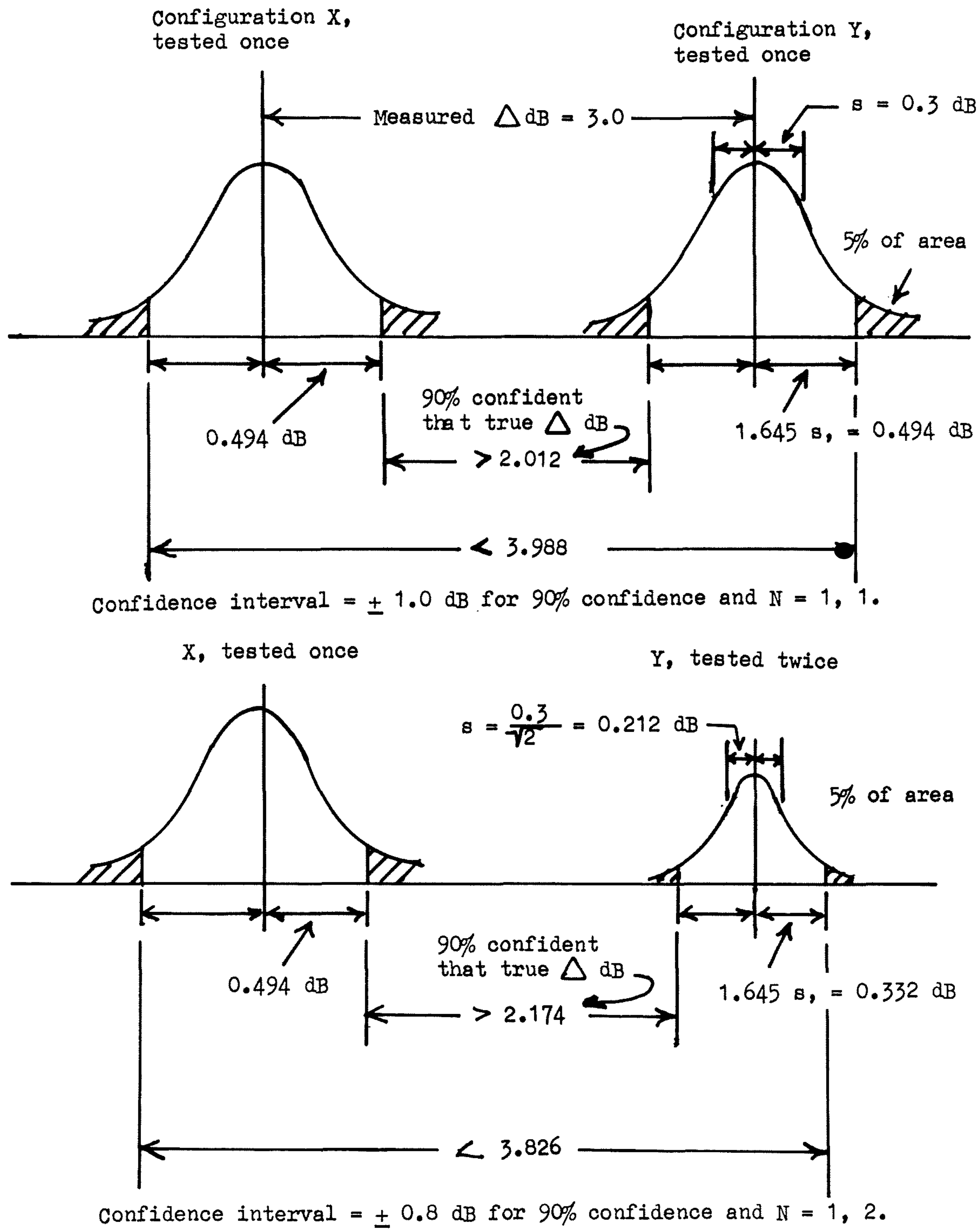


Figure 6-7.- Derivation of confidence intervals.

TABLE 6-I.- Source Power Correction, dB,
(To be added to tabulated data)

(a) Static tests

Test ID									
1-157	-0.1	1-501, 518	-0.1	2-291, 299	+0.5	2-606, 614	+0.1	2-825	0.0
169	0.0	522, 536	-0.2	339, 355	-0.1	618, 626	0.0	833	+0.1
213	-0.2	538, 552	-0.5	363, 379	-0.2	630, 634	-0.1	841, 891	+0.2
229, 271	-0.3	556	-0.6	451, 484	+0.2	638, 654	+0.3	895, 909	+0.3
279	-0.4	567, 573	-0.5	492	+0.4	658, 676	+0.4	917, 921	+0.2
287	-0.5	577, 605	-0.3	508	+0.2	680, 705	+0.2	929	+0.3
296, 324	-0.1	614	+0.2	516, 524	+0.1	709, 717	+0.1	941, 969	+0.4
336	+0.2	622	+0.3	526, 530	-0.1	725	-0.1	1020	+0.9
340, 353	+0.3	630	-0.4	532, 540	-0.2	733, 749	-0.2	(1.572 rad)	
406	-0.6	640	+0.3	542, 544	-0.3	751, 757	-0.3	1020	+1.0
420, 435	-0.4	(1.572 rad)		546, 554	0.0	765	-0.4	(0.524 rad)	
439, 443	-0.9	640	+0.1	556, 568	-0.1	777	-0.1	1033	+1.0
448, 468	-0.4	(0.524 rad)		570, 578	-0.3	781	-0.2		
474, 482	-0.2	2-173	-0.1	586, 590	-0.4	789	-0.3		
486, 490	+0.1	(1.572 rad)		598	0.0	797, 801	+0.2		
495, 502	+0.2	173	+0.2			809, 817	+0.1		
506	0.0	(0.524 rad)							
		230	+0.3						
		240	+0.2						
		260	+0.3						
		(1.572 rad)							
		260	+0.5						
		(0.524 rad)							

(b) Wind Tunnel Tests

Run No.											
1, 15	+1.3	52, 55	+1.2	100, 121	+1.0	152, 159	+0.5	174, 183	+1.0	232, 249	+0.7
16, 35	+0.7	56, 76	+1.3	122, 147	+0.7	160, 168	+0.7	184, 198	+1.2		
36, 51	+1.1	77, 99	+0.9	148, 151	+0.8	169, 173	+0.9	198, 231	+0.9		

Microphone no. (See fig. 4-7 for angle)	1				2 11	
V_j, m/s	120	145	170	195		
SPL's for 24 one-third-octave bands	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$	$SPL_1 \cdots SPL_{24}$		
OASPL's	OASPL	OASPL	OASPL	OASPL		
PNL's	PNL	PNL	PNL	PNL		

TABLE 6-II.- Typical data set for one run sequence of static test program (one configuration, one **elevation** angle, four V_j's).

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TABLE 6-III.- Static Test Chronology.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
1-157	1.57	Baseline B + SFG + .26 rad sweep + 17.6 cm Nozzle	B	T.O.	SFG	No Slot	.262	17.6	.15	Aft	6.35	101.6	115.6	0.29	7	0.530	0.530	87.0	87.0
1-169		" " " " " " " " "	↓	Ldg.			↓		↓	↓	7.30	98.2	114.3	0.59	4	1.250	1.006	81.5	61.0
1-213	↓	Baseline A	A				.281		.07	Fwd	7.10	98.7	114.3	0.14	4-6	0.879	0.925	68.0	69.8
	.52	" "		↓							7.46	93.5	110.0	0.19	4-8				
1-229	1.57	" "		T.O.							6.77	99.5	114.4	0.11	4-6	0.593	0.593	80.0	80.0
	.52	" "			↓						7.40	93.3	109.7	0.29	6				
1-253	1.57	Baseline A + Reduced 3rd Flap Gap			RFG						6.75	98.4	113.1	0.30	6	0.593	0.593	79.0	79.0
	.52	" " " " " "			↓						7.57	92.3	109.0	0.13	6				
1-262	1.57	" " + Enlarged " " "			EFG						6.74	100.6	115.5	0.05	6	0.646	0.646	81.0	81.0
	.52	" " " " " "			↓						7.47	93.7	110.2	0.36	6				
1-271	1.57	" " + 1-Piece Fairing			-						7.51	95.6	112.2	0.19	6-7	0.559	0.559	78.5	78.5
	.52	" " " "			SFG						8.02	91.4	109.1	0.70	6				
1-279	1.57	" " + Serrated Trailing Edge									6.80	99.4	114.4	0.19	6	0.593	0.593	80.0	80.0
	.52	" " " " "									7.43	93.2	109.6	0.11	6				
1-287	1.57	" " + Rubber " "									6.90	98.6	113.8	0.22	5-6	0.593	0.593	81.5	81.5
	.52	" " " " "									7.33	92.8	109.0	0.21	6-7				
1-296	1.57	" "									6.74	98.8	113.7	0.10	6-7	0.593	0.593	80.0	80.0
1-300	↓	" " + Retimet T.E.									6.57	99.4	113.9	0.11	4-7	0.532	0.532	76.2	76.2
	.52	" " " "			↓						7.04	93.3	108.8	0.10	4-5				
1-308	1.57	" " + " " + 1-Piece Fairing			-						7.68	94.9	111.9	0.16	5-7	0.515	0.515	78.6	78.6
	.52	" " " " " "			-						7.91	90.4	107.8	0.06	5-7				
1-316	1.57	" " + Perforated T.E. + " "			-						8.06	93.7	111.5	0.11	6-7	0.515	0.515	80.0	80.0
	.52	" " " " " "			-						8.18	90.8	108.9	0.21	5				
1-324	1.57	" " + " "			SFG						6.92	98.6	113.9	0.13	6	0.559	0.559	77.5	77.5
	.52	" " " "			↓						7.49	91.9	108.4	0.13	5				
1-336	1.57	" " + Serrated T.E. + " "	↓	↓	-	↓	↓	↓	↓	↓	7.27	95.7	111.7	0.28	6	0.471	0.471	82.5	82.5

TABLE 6-III.- Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of Vj	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
1-340	1.57	Baseline A + Rubber T.E. + 1-Piece Fairing	A	T.O.	-	No Slot	.281	17.6	.07	Fwd	8.48	92.9	111.7	0.04	6-8	0.541	0.541	82.5	82.5
	.52	" " " " " "			-						8.50	89.9	108.6	0.08	4-5				
1-348	1.57	" " + Perf. T.E., Stuffed, + 1-Piece Fairing			-						8.40	93.6	112.1	0.01	6	0.541	0.541	82.3	80.0
1-352	↓	" " + " " "			SFG						7.29	97.8	113.9	0.27	6	0.593	0.593	78.4	78.4
	.52	" " " " "									7.58	91.2	107.9	0.13	6				
1-406	1.57	" "									7.08	98.2	113.8	0.09	4-7	0.559	0.559	80.2	80.1
	.52	" "				↓					7.80	91.5	108.8	-	7				
1-420	1.57	" " + 0.127 cm T.E. Slot				Var.					No Jet	-	-	-	7	-	-	-	-
1-423		" " " " "				136					6.26	100.1	114.1	0.10	7	0.593	0.593	80.0	80.5
1-427		" " " " "				194					4.37	104.0	113.6	0.47	7	0.586	0.593	78.0	80.3
1-431		" " " " "				207					3.76	105.5	113.8	0.35	7	0.576	0.593	77.2	80.0
1-435		" " " " "				0					6.51	99.2	113.5	0.11	6	0.593	0.593	80.5	80.5
1-439		" " + 0.0635 cm " "				227					3.73	105.2	113.5	0.39	6	0.564	0.593	76.0	79.8
1-443		" " " " "			↓	194					6.65	99.3	114.0	0.14	6	0.586	0.593	78.0	80.3
1-448		" " + " " " + 1-Piece Fairing			-	261					8.56	104.7	112.6	00.30	6-7	0.476	0.506	77.7	82.2
1-452		" " + " " " + " "			-	220					7.71	94.8	111.9	0.34	7-8	0.494	0.506	80.0	82.5
1-456		" " + " " " + " "			-	186					8.48	93.5	112.3	0.11	6-8	0.506	0.506	82.1	82.5
1-460	↓	" " + " " " + " "	↓	↓	-	142	↓	↓	↓	↓	8.38	93.7	112.2	0.10	6-7	0.506	0.506	82.5	82.5

TABLE 6-III.- Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
1-464	1.57	Baseline A + 0.0635 cm T.E. Slot + 1-Pc. Frg, Feltmetal Covered	A	T.O.	-	140	.281	17.65	.07	Fwd	8.06	94.0	111.7	0.39	5-8	0.468	0.494	83.0	83.0
1-463		" " + " " " + " " " "			-	187					7.90	93.9	111.4	0.17	6-8	0.465	0.492	81.7	83.1
1-474		" " + " " " + " " " "			-	221					7.20	95.0	111.1	0.31	6	0.506	0.506	82.2	82.7
1-482		" " + " " "			SFG	0					6.98	99.0	114.4	0.10	6	0.559	0.559	81.0	81.0
1-486		" " + .254 cm " "				85					6.37	99.7	113.7	0.19	6	0.628	0.628	81.5	81.5
1-490		" " + Closed " "				0					7.13	98.1	114.1	0.05	6	0.606	0.616	80.9	82.0
1-495		" " + .254 cm " "				164					2.87	108.0	114.4	-	6	0.628	0.628	80.2	81.4
1-497		" " + " " " + 1-Pc. Frg.			-	86					8.74	93.3	112.6	0.09	8	0.559	0.559	82.5	82.5
1-500		" " + " " " " " "			-	164					3.73	105.2	113.5	-	8	0.559	0.559	81.6	82.5
1-502		" " + Closed " " + " ", Feltmetal Covered			-	0					8.42	93.3	112.0	0.06	8	0.568	0.564	83.5	82.6
1-506		" " + " " " + Feltmetal 1-Pc. Fairing			-	0					8.34	93.7	112.1	0.12	6-8	0.560	0.548	79.1	77.2
1-510		" " + 0.15 cm Lower Surface Slot Near T.E.			SFG	119					6.55	99.3	113.7	0.21	6	0.559	0.559	79.5	80.0
1-514		" " " " " " " "				164					6.29	99.7	113.6	0.17	6	0.541	0.559	78.7	79.8
1-518		" " " " " " " "				222					5.04	103.6	114.8	0.97	6	0.459	0.555	75.6	79.4
1-522		" " + " L/S Slot Near T.E. + 1-Pc Fairing			-	119					8.33	94.0	112.5	-	7	0.471	0.471	81.9	82.0
1-524		" " " " " " " "			-	220					4.93	102.0	112.9	-	6	0.457	0.471	79.3	81.7
1-526		" " + " Upper Surface Slot Near T.E.			SFG	116					7.32	98.3	114.5	0.24	6	0.559	0.559	79.1	79.5
1-530		" " " " " " " "				221					5.96	100.7	113.9	0.26	6	0.459	0.557	75.0	78.9
1-534		" " + " U/S Slot Near T.E. + 1-Piece Fairing			-	119					8.63	94.5	113.6	-	6	0.471	0.471	81.3	81.5
1-536		" " " " " "			-	220					6.90	98.2	113.5	-	6	0.454	0.471	76.0	81.2
1-539		" " + " " " "			SFG	Var.					No Jet	-	-	-	6-8	-	-	-	-
1-541		" " + " L/S " " "				Var.					No Jet	-	-	-	6-8	-	-	-	-
1-544		" "				Clsd.					7.23	98.4	114.4	0.23	6	0.559	0.559	81.2	81.2
1-548		" "									7.22	98.5	114.5	0.16	6	0.559	0.559	81.2	81.2
1-552		" "									7.28	98.2	114.3	0.15	6	0.559	0.559	81.2	81.2
1-556		" " + 2nd + 3rd Flaps Individually Wrapped in 1/16" Rubber									7.32	98.9	115.0	0.42	6	0.487	0.583	79.1	79.1

TABLE 6-III. - Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
1-567	1.57	Baseline A + All Flaps Individually Wrapped in 1/16" Rubber	A	T.O.	SFG	Clsd	.281	17.65	.07	Fwd	6.89	98.4	113.6	0.16	6	0.682	0.581	81.2	80.4
1-571		" " + " " " " + EFG			EFG						6.77	100.0	115.0	-	6	0.673	0.600	78.2	76.4
1-573		" "			SFG						7.10	98.1	113.8	0.09	6	-	-	-	-
1-577		" " + 3rd Flap Removed			-						7.36	95.6	111.9	0.05	6	-	-	-	-
1-581		" " + 2nd and 3rd Flaps Removed			-						7.71	91.5	103.5	0.10	7	-	-	-	-
1-585		" " + 2nd Flap Removed			-						6.62	101.4	116.0	0.05	6	-	-	-	-
1-589		" " + 1st and 2nd Flaps Removed			-						6.72	100.8	115.6	0.06	6	-	-	-	-
1-593		" " + 1st Flap Removed			SFG						6.36	100.4	114.4	0.16	6	-	-	-	-
1-597		" " + 1st and 3rd Flaps Removed			-						6.93	97.4	112.7	0.12	7	-	-	-	-
1-601		" " + All Flaps Removed		-	-						8.05	90.3	108.1	0.22	7	-	-	-	-
1-605		" "		LDG.	SFG						7.04	98.9	114.4	0.05	4-5	-	-	-	-
1-614		" " + Nozzle Moved							.15	Mid	6.77	99.9	114.8	0.17	4	-	-	-	-
	.52	" " " "									7.32	94.5	110.7	0.03	4	-	-	-	-
1-622	1.57	" " + " "		T.O.							6.62	100.7	115.3	0.02	6	-	-	-	-
	.52	" " " "									6.16	95.3	108.9	0.64	3-5	-	-	-	-
1-630	1.57	Reflecting Plane	-	-	-	-	-	-	-	-	7.91	90.5	107.9	0.04	7	-	-	-	-

TABLE 6-III.- Continued.

TEST I.D.		TEST CONFIGURATION									Acoustic Performance - PNLM					Wing/Flap Performance			
			Flap					Nozzle				dB				Thrust Vector Angle - Rad		Turning Efficiency %	
No.	Elev. Angle-Rad	Description	Type	T.O. or Ldg.	3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Type	Angle Rad.	Pos'n	Exp. of V_j	150 m/s	250 m/s	Scatter dB	PNLM Mic. Pos.	150 m/s	250 m/s	150 m/s	250 m/s
1-040	1.57	17.6 cm Conical Nozzle	-	-	-	-	-	17.6	-	-	8.65	87.5	106.6	0.09	8	-	-	-	-
	.52	" " "						↓			8.68	83.9	103.1	0.08	8	-	-	-	-
2-173	1.57	Mixer Nozzle With Treated Ejector (MNTE)						MNTE			4.83	90.2	100.8	0.91	5-8	-	-	-	-
	.52	" " " " " "						↓			5.65	86.3	93.7	0.95	4-9	-	-	-	-
2-230	1.57	Mixer Nozzle With Hardwall Ejector (MNHE)						MNHE			6.52	90.1	104.5	0.14	7-8	-	-	-	-
	.52	" " " " " "						↓			6.17	90.0	101.7	-	7-8	-	-	-	-
2-240	1.57	Mixer Nozzle						MN			7.35	90.5	106.7	0.21	7-8	-	-	-	-
	.52	" "						↓			7.05	88.6	103.6	0.29	7-8	-	-	-	-
2-260	1.57	20.2 cm Conical Nozzle						20.2			8.44	90.3	109.0	0.29	7-8	-	-	-	-
	..52	" " "	↓	↓	↓	↓	↓	↓	↓	↓	8.53	87.7	106.7	0.46	8	-	-	-	-
2-291	1.57	Baseline A	A	T.O.	SFG	Clsd	.28	17.6	.07	Fwd	7.27	98.3	114.4	0.08	5	-	-	-	-
	.52	" "		↓							7.88	91.9	109.2	0.13	5	-	-	-	-
2-293	1.57	" "		Ldg							6.78	99.6	114.5	0.07	4	-	-	-	-
	.52	" "	↓	↓		↓	↓		↓	↓	7.50	93.7	110.3	0.07	5	-	-	-	-
2-339	1.57	B/L B + SFG + .26 rad Sweep + 17.6 cm Nozzle	B	T.O.		No Slot	.26		.15	Aft	7.38	99.8	116.1	0.20	5	-	-	-	-
	.52	" " " " " " " "			↓						7.24	94.9	110.9	0.10	4-5	-	-	-	-
2-355	1.57	" " + " + " " " + " " + 1-Piece Fairing			-						8.73	95.4	114.7	0.09	8	-	-	-	-
	.52	" " " " " " " " " "		↓	-						8.13	91.1	109.0	0.11	7	-	-	-	-
2-363	1.57	" " + " + " " " + " "		Ldg.	SFG						7.04	98.6	114.2	0.15	4	-	-	-	-
	.52	" " " " " " " "			↓						7.06	96.3	111.9	0.63	4	-	-	-	-
2-373	1.57	" " + " + " " + " " " + " "			-						8.68	97.8	117.0	0.17	4-5	-	-	-	-
	.52	" " " " " " " " " "			-			↓			8.53	93.9	112.7	0.20	4-5	-	-	-	-
2-451	1.57	" " + " + " "			SFG			20.2			6.99	102.0	117.4	0.06	4	1.167	1.092	81.2	75.0
	.52	" " " " "		↓							7.07	98.2	113.9	0.18	4				
2-460	1.57	" " " " "		T.O.							6.80	102.1	117.0	0.15	7	0.550	0.550	87.5	87.5
	.52	" " " " "	↓	↓	↓	↓	↓	↓	↓	↓	7.62	95.8	112.7	0.16	4-5				

TABLE 6-III.- Continued.

TEST I.D.		TEST CONFIGURATION									Acoustic Performance - PNLM					Wing/Flap Performance			
			Flap					Nozzle				dB				Thrust Vector Angle - Rad		Turning Efficiency %	
No.	Elev. Angle-Rad	Description	Type	T.O. or Ldg.	3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Type	Angle Rad.	Pos'n	Exp. of V_j	150 m/s	250 m/s	Scatter dB	PNLM Mic. Pos.	150 m/s	250 m/s	150 m/s	250 m/s
2-463	1.57	B/L B + SFG	B	T.O.	SFG	No Slot	0	20.2	.15	Aft	6.86	102.3	117.5	0.00	4,7	0.544	0.556	87.5	87.5
	.52	" " "									7.68	95.3	112.3	0.24	4				
2-484	1.57	" "			RFG						6.91	101.6	116.9	0.06	4-8	0.515	0.486	87.5	87.5
	.52	" "									7.46	94.9	111.4	0.11	4				
2-492	1.57	" "									6.88	102.1	117.3	0.31	7	0.532	0.494	88.0	87.5
	.52	" "	↓	↓	↓		↓	↓	↓	↓	7.53	95.5	112.2	0.29	7				
		Baseline B + Treatments																	
		3rd Flap Surface / T.E. / Tip / Stuffed / Membr.																	
2-503	1.57	3E 18% P.P. 18% P.P. No No (18% P.P. = Perforated Plate, 18% Open)	B	T.O.	RFG		0	20.2	.15	Aft	6.77	101.9	116.9	0.58	7	0.518	0.480	87.5	87.5
	.52	" " " " " " "									7.75	95.3	112.4	0.20	7				
2-516	1.57	3L " " 30-Sh.Rub. " "									6.68	102.2	117.0	0.19	7	0.533	0.495	87.3	88.7
	.52	" " " " " " "									7.36	95.7	112.0	0.23	7				
2-524	1.57	3E " " 18% P.P. " Hard									7.15	102.0	117.8	-	5,7	0.521	0.520	89.5	88.5
2-526		" " " " " " Rubber									-	102.2	118.0	-	5,7	0.460	0.460	86.7	86.7
2-528		" " " " " Yes No										101.6	117.4	-	5,7	0.437	0.437	86.3	86.3
2-530		3L " " 30-Sh.Rub. " "										102.2	118.0	-	5	0.425	0.425	85.2	85.2
2-532		3E " " 18% P.P. " Hard										102.0	117.8	-	5,7	0.486	0.486	87.5	87.5
2-534	↓	3F 37% P.P. 37% P.P. No "	↓	↓	↓	↓	↓	↓	↓	↓	↓	101.6	117.4	-	5	0.453	0.453	86.7	86.7

TABLE 6-III.- Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description (3rd Flap Surface, T.E., Tip, Stuffed, Membr.)	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
2-536	1.57	3F 37% P.P. 37% P.P. No Hard Upper Surf. Taped Over	B	T.O.	RFG	No Slot	0	20.2	.15	Aft	7.15	102.7	118.5	-	5	0.496	0.496	85.5	87.5
2-538		3E 18% P.P. 18% P.P. Yes Rubber										101.7	117.5	-	5	0.490	0.490	87.5	87.5
2-540		3F 37% P.P. 37% P.P. " "										101.7	117.5	-	5,7	0.448	0.448	85.4	87.2
2-542		" " " " " " " " " "										102.0	117.8	-	5	0.489	0.489	86.8	86.8
2-544		3G Brunsmet Hard No No										101.8	117.6	-	5,7	0.477	0.477	86.6	86.6
2-546		" " " " "										101.5	117.3	-	5,7	0.510	0.510	88.4	88.4
2-548		Baseline B										101.3	117.1	-	4-5	0.521	0.521	88.5	88.5
2-550		" " + 3rd Flap Removed			-						7.33	100.8	117.1	-	5	-	-	-	-
2-552		" " + 2nd and 3rd Flaps Removed			-						7.23	96.8	112.8	-	6	-	-	-	-
2-554		3E 18% P.P. 18% P.P. Yes No Both surfs. Taped Over			RFG						7.15	102.2	118.0	-	5,7	0.482	0.482	88.4	88.4
2-556		" " " " " " " Both surfs. Taped Over ~~+ 1-Piece Fairing~~			-						9.02	97.7	117.6	0.24	7-8	0.370	0.420	92.5	89.3
	.52	" " " " " " "			-						8.64	93.0	112.7	0.09	7				
2-564	1.57	" " " " " " " + 1-Piece Fairing			-						8.82	97.5	117.0	0.20	7	0.352	0.382	92.5	91.5
2-568		Baseline B + All Flaps Removed		-	-						8.47	92.5	111.1	-	7				
2-570	1.57	B/L B + 2nd and 3rd Slots Covered		T.O.	-						7.64	99.1	116.0	0.28	5,7	.405	.462	88.6	91.0
	.52	" " " " " " "			-						8.51	93.3	112.0	0.15	5,7				
2-576	1.57	" " + 2nd Slot Covered			RFG						6.96	101.2	116.5	0.07	4-5	0.440	0.440	88.0	88.0
	.52	" " " " "									7.59	94.4	111.1	0.35	4				
2-586	1.57	" " + " " " + 3rd Flap Removed			-						7.44	99.2	115.7	0.18	5-8	-	-	-	-
2-590		" " + 3rd " "			-						7.14	100.7	116.4	0.06	5	0.464	0.470	90.5	88.8
	.52	" " " " "									7.87	94.8	112.1	0.10	4				
2-598	1.57	" " + 1st and 3rd Slots Covered			-						7.62	100.6	117.4	0.19	4	0.495	0.495	91.0	91.0
	.52	" " " " " " "			-						7.81	95.5	112.7	0.14	4				
2-606	1.57	" " + 1st Slot Covered			RFG						7.04	101.7	117.2	0.46	4	0.525	0.525	90.6	89.6
	.52	" " " " "									7.44	96.1	112.5	0.24	4				

TABLE 6-III. - Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of Vj	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
2-614	1.57	B/L B + 1st and 2nd Slots Covered	B	T.O.	RFG	No Slot	0	20.2	.15	Aft	7.85	100.2	117.5	0.31	4	0.470	0.470	91.5	91.5
		B/L B + Segmented Fairing Over All Slots, + Treatments																	
		3rd Flap Surface T.E. Tip Stuffed Membr.																	
2-618	1.57	3A 60-SH.Rub. 60-Sh. Rub. - -									9.10	96.9	117.0	-	8	0.351	0.408	91.3	92.2
2-622		3B 30-Sh Rub. 30-Sh. Rub. - -										97.4	117.5	-	7-8	0.392	0.392	89.5	89.5
2-626		3C Sponge " Sponge " - -										97.8	117.9	-	8	0.349	0.349	90.4	90.4
2-630		3D Retimet 80 Retimet 80 - No										97.3	117.4	-	7-8	0.384	0.384	90.5	90.5
2-634		" " " " " - Yes										97.4	117.4	-	8	0.415	0.415	91.4	91.4
2-638		3E 18% P.P. 18% P.P. Yes No										97.3	117.4	-	8	0.367	0.367	89.5	89.5
2-642		3A 60-Sh.Rub. 60-Sh.Rub. - -										97.6	117.7	-	8	0.350	0.380	89.4	91.0
2-646		3H 11-Rayl F/M 11-Rayl F/M No No (F/M = Feltmetal)										97.8	117.9	-	8	0.352	0.406	87.3	89.8
2-650		3J 30-Rayl " 30-Rayl " " "										97.5	117.6	-	8	0.352	0.406	88.7	84.7
2-654		3K 48-Rayl " 48-Rayl " " "										98.4	118.5	-	8	0.400	0.450	87.6	90.2
2-658		3J 30-Rayl " 30-Rayl " Yes "										97.4	117.5	-	8	0.384	0.384	89.5	89.5
2-664		" " " " " " " " Rubber										97.5	117.6	-	8	0.390	0.390	89.5	90.2
2-668		B/L B + Segmented Fairing Over All Slots			-						8.77	97.2	116.5	0.42	8	0.382	0.390	89.3	91.2
	.52	" " " " " " "			-						8.41	92.3	110.9	0.21	8				
2-676	1.57	" "			-						6.99	101.4	116.9	0.10	5,7	0.500	0.500	86.7	86.7

TABLE 6-III.- Continued.

TEST I.D. No.	Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
2-680	1.57	B/L B	B	T.O.	RFG	No Slot	0	20.2	.15	Aft	6.80	101.9	116.9	0.10	4-7	0.522	0.492	89.0	88.2
2-685		" " + 1-Piece Fairing			-						8.85	97.5	117.3	0.27	8	0.380	0.382	91.5	91.0
2-689		" " + " " " To T.E.			-						8.97	97.5	117.3	0.25	8	0.380	0.400	91.5	90.5
2-693		" " + " " " + 3E 3rd Flap, Stuffed			-						8.83	97.7	117.2	0.27	8	0.352	0.385	90.0	90.0
2-697		" " + Segmented " + " " " "			-						8.86	97.7	117.3	0.13	8	0.375	.405	90.4	89.1
2-701		" " + " "			-						8.78	97.6	117.0	0.32	8	0.365	0.400	90.7	90.7
2-705		" "			-						6.99	101.7	117.1	0.12	4-7	0.475	0.485	87.5	87.5
2-709		B/L A + 20.2 cm Nozzle + 0° Sweep + RFG	A		RFG	Clsd.			.07	Fwd	6.98	100.9	116.3	0.12	5,7	0.625	0.625	84.0	84.0
	.52	" " " " " " "									7.56	93.9	110.6	0.23	4				
2-717	1.57	" " + " " + " " + " + 3E 3rd Fl., Stuffed									7.23	100.7	116.7	0.09	4-7	0.608	0.618	80.9	83.2
	.52	" " " " " " " " " "									7.62	93.3	110.1	0.22	4				
2-725	1.57	" " + " " + " " + "		Ldg.							7.31	101.0	117.2	0.27	4	0.908	0.917	73.5	73.5
	.52	" " " " " " "									7.16	93.5	109.3	0.27	3				
2-733	1.57	" " + RFG		T.O.			.28	17.6			6.91	98.0	113.3	0.11	7	0.550	0.583	82.5	84.0
	.52	" " "									7.66	91.9	108.9	0.17	4-5				
2-741	1.57	" " + " + 3E, Stuffed									6.64	98.1	112.8	0.10	5,7	0.602	0.605	82.5	83.1
	.52	" " " " "									7.94	91.2	108.7	0.22	4-7				
2-749	1.57	" " + " + " " + Tape Over Screws and End Slots									7.27	97.5	113.5	-	5,7	0.600	0.600	82.0	82.0
2-751		" " + " + " " + Taped To Same Treatment Span as B/L B												-	5,7	0.610	0.610	84.5	84.5
2-753		" " + 3E, Stuffed, + Taped To B/L B Treatment Span			SFG						6.97	98.5	113.8	-	4-7	0.630	0.630	85.0	85.0
2-755		" " + " "												-	7	0.645	0.645	84.7	84.7
2-757		" " + " "									7.01	98.4	113.9	0.15	7	0.625	0.625	84.0	84.0
	.52	" " " "									8.09	91.6	109.4	0.27	7				
2-765	1.57	" "									6.80	98.7	113.7	0.19	4,7	0.617	0.607	84.5	85.4
	.52	" "									7.53	92.5	109.1	0.36	4,7				
2-777	1.57	" "									7.33	98.3	114.5	0.09	5	0.615	0.619	84.5	87.4

TABLE 6-III. - Continued

TEST I.D. No.	TEST I.D. Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3Rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of V_j	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
2-781	1.57	B/L A	A	Ldg.	SFG	CLSD	.28	17.6	.07	Fwd	6.62	99.5	114.1	0.01	4-5	0.920	0.950	76.2	78.0
	.52	" "		↓							7.88	93.1	110.5	0.20	4-5				
2-789	1.57	" " + 20.2 cm Nozzle		T.O.				20.2			7.18	99.9	115.9	0.24	5,7	0.579	0.552	85.6	84.6
	.52	" " " "									7.69	94.0	110.0	0.07	5,8				
2-797	1.57	" " + " "									7.26	100.1	116.1	0.17	5	0.570	0.538	84.3	84.3
2-801	↓	" " + " " + 3E, Stuffed									7.75	99.9	115.6	0.10	7	0.560	0.560	81.8	81.8
	.52	" " " " " "			↓						7.44	93.9	110.4	0.19	5-8				
2-809	1.57	" " + " " + " " + 1-Piece Fairing			-						8.96	95.3	115.2	0.23	8	0.518	0.542	85.1	86.5
	.52	" " " " " " " "			-						8.71	91.9	111.1	0.27	8				
2-817	1.57	" " + " " + 1-Piece Fairing			-						8.72	95.7	115.0	0.16	8	0.538	0.528	87.7	86.5
	.52	" " " " " "		↓	-						8.53	92.1	110.9	0.17	8				
2-825	1.57	" " + " "		Ldg.	SFG						7.13	100.3	116.0	0.04	4-6	0.920	0.950	76.2	78.0
	.52	" " " "			↓						7.35	94.9	111.1	0.27	4-5				
2-833	1.57	" " + " " + " "			-						8.42	96.9	115.6	0.40	8	0.869	0.810	77.9	72.5
	.52	" " " " " "	↓	↓	-	↓	↓	↓	↓	↓	8.71	93.5	112.7	0.16	8				
2-841	1.57	B/L B + Mixer Nozzle With Treated Ejector	B	T.O.	RFG	No Slot	0	MNTE	.15	Aft	6.49	94.1	108.4	0.19	4-8	0.428	0.495	89.5	89.5
	.52	" " " " " " "	↓	↓	↓	↓	↓	↓	↓	↓	6.97	89.7	105.1	0.11	7-8				

TABLE 6-III.- CONCLUDED

TEST I.D. No.	TEST I.D. Elev. Angle-Rad	TEST CONFIGURATION Description	Flap Type	Flap T.O. or Ldg.	Flap 3rd Gap	Slot Vel. m/s	Wing Sweep Rad	Nozzle Type	Nozzle Angle Rad.	Nozzle Pos'n	Acoustic Performance - PNLM Exp. of Vj	dB 150 m/s	dB 250 m/s	Scatter dB	PNLM Mic. Pos.	Wing/Flap Performance Thrust Vector Angle - Rad 150 m/s	Thrust Vector Angle - Rad 250 m/s	Turning Efficiency % 150 m/s	Turning Efficiency % 250 m/s
2-857	1.57	B/L B = MNTE + SFG	B	T.O	SFG	No Slot	0	MNTE	.15	Aft	6.51	94.5	108.8	0.07	7-8	0.475	0.492	91.0	91.0
	.52	" " " "			↓						6.92	89.8	105.1	0.13	7-8				
2-865	1.57	" " + " + 3E 3rd Flap, Taped Over, + 1-Piece Fairing			-						7.21	92.5	108.4	0.14	7-8	0.358	0.358	92.5	90.5
2-869		" " + " + " " " + 1-Piece Fairing			-						6.96	92.8	108.1	0.14	7-8	0.345	0.345	89.4	89.4
2-873		" " + " + 3B 30-Sh. Rubber 3rd Flap + 1-Piece Fairing			-						7.25	92.4	108.3	0.15	7-8	0.380	0.320	92.0	92.0
2-877		" " + " + 3D Retimet 80 " " + " "			-						6.61	93.4	107.9	0.18	7-8	0.343	0.343	90.3	88.6
2-881		" " + " + 3J 30-Rayl F/M " ", Stbd, + 1-Pc Fairing			-						6.91	92.8	108.1	0.04	7-8	0.354	0.369	92.4	89.8
2-885		" " + "			RFG						6.25	95.4	109.2	0.39	4-5	0.405	0.425	86.8	88.2
2-901		" " + " + 30-Rayl Feltmetal on 2nd and 3rd L.E.'s									6.75	94.4	109.3	0.49	7-8	0.386	0.430	86.5	85.2
2-909	↓	" " + " + Segmented Fairing on 2nd and 3rd Slots									7.18	92.2	108.0	0.19	7-8	0.341	0.373	86.3	88.5
	.52	" " " " " " " " " "		↓	↓						7.25	89.0	105.0	0.17	8				
2-917	1.57	" " + " + SFG		Ldg.	SFG						6.93	94.8	110.1	0.14	4-8	0.978	0.953	73.7	75.0
2-921	↓	" " + "			RFG						7.01	94.1	109.6	0.08	4,8	0.877	0.930	71.7	75.0
	.52	" " "			↓						7.45	89.8	106.3	0.33	4-5				
2-929	1.57	" " + " + Segmented Fairing on 2nd and 3rd Slots			-						7.10	94.3	110.0	0.18	8	0.828	0.830	72.3	71.2
2-941		" " + " + " " " All Slots			-						7.26	94.3	110.4	0.18	8	0.785	0.785	67.0	67.0
2-949		" " + "			RFG						6.46	96.1	110.3	0.14	4-8	0.890	0.890	71.0	71.0
2-953		" " + " + SFG			SFG						6.90	95.9	111.1	0.21	4	0.945	0.945	70.5	72.2
2-961		" " + "		↓	RFG						7.10	94.4	110.2	-	7	-	-	-	-
2-965		" " + "		T.O.				↓			6.23	95.4	109.2	-	7	-	-	-	-
2-969		" "	↓		↓	↓	↓	20.2	↓	↓	6.70	101.7	116.6	-	6	-	-	-	-
2-1020	↓	Baseline A + 10.2 cm Lower Nozzle	A		SFG	Clad	.28	17.6	.07	Fwd	8.20	92.3	110.4	0.35	8	0.090	0.130	86.5	89.2
	.52	" " " " "		↓							8.37	89.2	107.6	0.20	8				
2-1033	1.57	" " + " " "		Ldg							8.43	94.4	113.1	0.17	4-8	0.535	0.535	70.0	74.0
	.52		↓	↓	↓	↓	↓	↓	↓	↓	9.65	89.8	111.1	0.14	4				

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7. STATIC TEST ACOUSTIC RESULTS

Jet Noise

Figure 7-1 shows the variation of PNL with jet velocity for the five nozzle and nozzle/ejector configurations tested without a wing/flap model in the static program. The curves are for the microphone arch horizontal, in what would be the flyover plane if the wing and flap were present.

Figure 7-1(a) compares the two conical nozzles, with the PNL of the larger corrected to the area of the smaller. The curves agree with 0.7 dB at the central angles, from 1.048 to 2.094 rad (60° to 120°) aft. The difference of 1.5 to 3 dB at the extreme angles of 0.524 and 2.618 rad (30° and 150°) may be attributable to the effect of nozzle size on noise refraction in the jet. Refraction effects increase rapidly at forward and aft angles.

Figures 7-1(b) through 7-1(d) cover the fluted mixer nozzle, alone and with the hardwall and treated ejectors. The five configurations are compared at 195 m/s in figure 7-2. The treated ejector makes the mixer nozzle quieter by about 1 dB, while the hardwall ejector makes it noisier by 1-2 dB; the light sheetmetal mixing section of the hardwall ejector presumably responds to internal turbulence and radiates its own noise.

Jet noise spectra of the smaller conical nozzle at two velocities are shown in figure 7-3 for the same angles as the PNL-velocity curves of figure 7-1(a). The scales are shifted so that the two spectra for each microphone remain high to relatively high frequencies, while the spectra at the forward and aft angles fall off faster.

Baseline Configurations

PNLM.- Figure 6-6 compares the PNLM's of the two baseline configurations. In this figure the PNLM's of baseline B have been reduced by 1.2 dB to correct for the larger and thus noisier nozzle of this baseline. It may be seen that baseline B, initially thought to be quieter than A, is actually about 1.4 dB noisier at 0.524 rad below the wing at takeoff (takeoff flap setting, 250 m/s V_j). The difference is larger, up to 2.0 dB, at other combinations

of angle and jet velocity that are less significant to takeoff noise. The aerodynamic advantage of baseline B more than offsets its higher noise, however, as is discussed in section 11, Application to Aircraft.

Directivity.- Figure 7-4 shows the directivity patterns of the baseline configurations at takeoff flaps and 195 m/s jet velocity. The figures plot full-scale PNdB at 152.4-m (500-ft) sideline or flyover against angle aft of the nose of the aircraft, for a series of elevation angles. Repeat runs are plotted together to show the consistency of the data. The baselines are compared in figure 7-5. All points are corrected for any difference between the actual jet velocity and 195.0 m/s. The PNLM data just discussed were curve-fitted over the range of jet velocities tested but the directivity plots draw on only the 195-m/s runs.

The baseline A curves at 1.572 and 0.524 rad below the wing, figure 7-4(a) and (b), show runs 1-241 and 1-243 to be 1 PNdB high compared to the rest of the data, for reasons unknown. These runs were therefore eliminated from the PNLM repeatability plot, figure 6-6. The sequence containing runs 1-241 and 1-243 is also, however, the source of the 0-rad and 1.048-rad curves of figure 7-4(c); these curves have therefore been lowered by 1 PNdB. The consistency of repeat runs in all other cases is excellent for both baselines.

When the baselines are compared (fig. 7-5), it is seen that baseline A is quieter than baseline B by quite close to 2 PNdB over much of the underwing hemisphere. The only significant exceptions are well aft of the wing, where noise levels are inherently more variable.

In general neither baseline exhibits the two-lobed directivity pattern, with a forward lobe from the jet and reflected jet and an aft lobe from trailing edge noise, that might be expected. The two effects apparently combine to yield a smooth peak just forward of the wing.

Spectra.- Figure 7-6 compares the spectra of baseline A, takeoff flaps, at the flyover microphone in seven repeat runs. The spectra from the first two runs tail off fairly smoothly out to the highest frequencies. The remaining spectra have a knee at 5000 Hz full scale, 25,000 Hz model scale. Atmo-

spheric attenuation is strong at these frequencies, so test temperature and relative humidity were checked to see if they might correlate with the distinction but no pattern was found. All temperatures were between -4°C and +10°C (25 and 49°F) and all relative humidities were between 65 and 80%, with no correlation between either factor and the presence or absence of the knee.

The peaks and valleys that are prominent at 50-200 Hz full scale and persist to 500 Hz in figure 7-6 and the rest of the static-test spectra are caused by ground reflection. Frequencies for maximum reinforcement and cancellation of direct and reflected signals have been calculated from the geometry applicable to figure 7-6 and are compared to the observed frequencies in the following table.

	Interference Frequency, Hz, Full-Scale							
Cancellation -								
Calculated -	35		104		173		242	
Observed (fig. 7-6)-	≤50		100		160		250	
Reinforcement -								
Calculated -		69		138		204		278
Observed (fig. 7-6)-		80		125		200		315

The agreement between the observed and calculated values is as good as can be obtained with one-third-octave-band resolution.

Reflection effects become indistinguishable at frequencies higher than those listed above, where multiple reinforcements and cancellations within each one-third-octave band diminish the net effect. Except in figure 9-5, reflection effects have not been corrected for in this report. Reflections are constant at a given microphone and arch angle, however, so spectra are directly comparable on this basis.

Additional takeoff spectra for the two baselines and for baseline A with the fairing over the flap slots are presented in figures 7-7 through 7-11. Shifted scales are used so that comparable spectra at a given microphone are grouped, while the spectra of the various microhpones are separated. Microphone locations are defined in figure 4-7.

Figures 7-7 and 7-8 show baseline A spectra: in the flyover plane at two jet velocities in figure 7-7, and in the flyover and 0.524-rad (30°) elevation planes at 195 m/s in figure 7-8. The effect of flap interaction noise as distinct from jet noise can be seen on all but the most forward and rearward microphones in figure 7-7. The shifted spectra at the two jet velocities are approximately superimposed at the lower frequencies, where flap interaction noise has its greatest effect, while the high-velocity curve is about 5 dB above the low-velocity curve in the 3000-Hz range, where jet noise is more important. The difference can also be expressed as a higher velocity exponent for jet noise than for flap interaction noise.

From microphone 1 to microphone 8 the spectra in the 800-5000-Hz range of figure 7-7 become progressively flatter as one moves aft, then become steeper again at microphones 9 and 10. Roll-off at 245 m/s varies linearly from 6.5 dB per octave at microphone 1 (0.524 rad aft) to 3.0 dB per octave at microphone 8 (1.832 rad aft). Roll-off at 170 m/s is consistently 0.5 dB per octave higher.

The effect of reducing elevation angle from flyover to 0.524 rad (30°) below the wing, shown in figure 7-8, is primarily to flatten the spectra by diminishing the hump at 315 Hz caused by flap interaction noise. Flap interaction noise is directed predominantly downward rather than to the side.

Figure 7-9 shows baseline B noise spectra at two velocities. A 4-5 dB spike appears at 120 m/s jet velocity at 2500 Hz full scale. The spike, whose cause was not determined, is submerged by jet noise at 195 m/s. Otherwise the spectra patterns are similar to those of baseline A. The similarity is also apparent in figure 7-10, which compares the spectra of the two baselines directly. The main difference is that baseline B is noisier than baseline A by up to 5 dB. When the difference between SPL and PNL is considered, the average difference between the baseline spectra appears to be consistent with the 1-2 dB difference in PNL noted in the discussions of baseline PNLM's and directivities.

The final figure of the group, figure 7-11, shows the spectra of baseline A in the floyver plane, with all slots covered by a fairing. Comparing

figures 7-11 and 7-7, the principal effect is a marked flattening of the curves. Roll-off at 195 m/s is in the 2-4 dB per octave range, compared to 3-6 without the fairing. Roll-off decreases back to about 1.8 rad aft in both cases. The flattening is due to the reduction of flap impingement noise, which peaks at the lower frequencies.

Figures 7-11 also gives an impression of shallower low-frequency ground-reflection peaks and valleys than does figure 7-7. Comparing the same microphones in the two figures, however, the differences are small.

Effects of Configuration Variables on PNLM

In the following discussion, as throughout the report, negative noise increments indicate that the configuration was quieter than the baseline and are favorable. All abbreviations, such as RFG for reduced flap gap, MNTE for mixer nozzle with treated ejector, etc., are explained in appendix C.

Effects of flap treatments.- It is noted in section 6, Treatment of Acoustic Data, that flap treatment effects are difficult to identify conclusively from single comparisons; the effects are of the order of 1 PNdB or less, while the confidence interval for a 90% confidence level with a single comparison is ± 1.0 PNdB. Perforated and flexible trailing edges, however, were tested repeatedly; they appeared to have favorable effects in the series 1 statis tests and were further explored in series 2. To achieve the lower confidence interval that applies to repeated testing, all comparisons involving perforated, perforated and wire-wool stuffed, or flexible trailing edges were grouped. In the perforated groups no distinction was made between degrees of openness or between the presence and absence of a membrane. In the flexible group all hardness grades were considered together. The results are shown in table 7-I and are summarized in the table that follows this paragraph. Table 7-I lists: treatment effects on PNLM by elevation angle and jet velocity; the number of repeat tests involved for the baseline and the treatment; and the applicable confidence interval, which averages ± 0.7 PNdB. The table below shows only treatment effect, averaged over elevation angle and jet velocity.

Summary of Flap Treatment Effects

Baseline	Test Series	Perforated T.E.'s	Perforated and Stuffed T.E.'s	Flexible T.E.'s
		Effect of Treatment on PNLM, PNdB		
B/L A	1	-0.3	-0.6	0.0
B/L A + Fairing	1	-0.9		-1.4
B/L B	2	+0.4	+0.4	+0.4
B/L B + Fairing	2	+0.2	+0.1	+0.2
B/L A	2		0.0	
B/L A + Fairing	2		0.0	
B/L A + RFG	2		-0.4	
B/L B + MNTE + Frg	2	0.2		-0.1

Both perforated and flexible trailing edges showed definite promise in series 1. Series 2 rescinded the promise. Treatments that were beneficial by 1-2 PNdB in series 1 were detrimental by about 0.5 PNdB on the new baseline in series 2. Moreover, the gains achieved on baseline A in series 1 were not duplicated on the same baseline in series 2, although the baseline PNLM's were consistent in the two series.

The difference between series 1 and series 2 in the effect of treatment on baseline A may well be real. It is shown in section 8, Static Test Aero/Propulsion Results, that the forces on the baseline A wing/flap definitely shifted between the two test series, with a corresponding change in the trailing edge velocity profiles.

The flow field of baseline A was different in the two series, and the difference may account for the change in treatment effects. The general conclusion that must be drawn, however, is that passive treatments may reduce PNLM by 1-2 PNdB under the most favorable flow conditions but may also be detrimental by up to 0.5 PNdB.

Effect of fairing.- The effect on PNLM of covering the flap slots with a fairing is shown in table 7-II. The effect is substantial at a jet velocity of 150 m/s, where flap interaction noise is less overridden by the noise of the jet itself; the reductions at this jet velocity are 3-5 PNdB at flyover

and 14 PNdB 0524 rad (30°) below the wing. At 250 m/s V_j, jet noise is more dominant, and the reduction is in the 1 PNdB range.

The V_j exponent of PNLM for baselines A and B are 7.0 without the fairing, which is in the expected range for flap interaction PNL. With the fairing the exponents are 8.1 and 8.8 respectively; these are typical of pure jet PNL exponents (approximately 8.5 for the conical nozzles in the present program). The fairing apparently reduces the flap interaction contribution and makes total noise behave like jet noise in respect to V_j exponent. The exponent with the fairing, however, is surprisingly sensitive to the moderate configurational difference between the baselines.

Effect of third flap gap.- Figure 7-12 shows the effect on PNLM of varying the width of the gap between the second and third flaps. The average slopes of the curves (increase in PNdB for a 1%-wing-chord increase in gap) are:

	Baseline A	Baseline B
1.572 rad below wing -	1.2	0.5
0.524 rad below wing -	0.7	0.2

The effect of a change in gap is seen to be about twice as great at flyover as at the 0.524-rad sideline condition, and baseline A appears to be considerably more sensitive to gap than baseline B.

Effect of mixer nozzle.- As would be expected, the mixer nozzle with acoustically-treated ejector (MNTE) yields the greatest takeoff PNLM reduction of any of the configurations tested. This nozzle configuration significantly reduces the mixed jet velocity, as is shown in the velocity-profile curves of a later section. The following table shows the effect of the mixer nozzle and treated ejector. Since the mixer nozzle has a primary area of 191 cm^2 (29.6 in^2) compared to 320 cm^2 (49.6 in^2) for the 20.20-cm (7.95-in) conical nozzle of baseline B, 2.2 PNdB has been added to the MNTE data to adjust for the difference in nozzle size. The 2.2 PNdB corrects only jet noise; other size-dependent corrections, such as increased trailing edge noise, inflow noise, and jet turning noise, were not considered.

Effect of Mixer Nozzle With Treated Ejector on PNLM

Angle below wing, rad	1.572 (Flyover plane)		0.524 (30° sideline plane)	
V_j, m/s	150	250	150	250
Baseline B, takeoff				
Effect of MNTE, PNdB	-4.4	-5.8	-3.2	-4.4
No. of tests: B/L,MNTE	7,3		2,1	
Confidence interval, PNdB	±0.5		±0.8	
Baseline B + Fairing, takeoff	-0.2	-2.3		
	2,1			
	±0.8			

Effect of sweep angle.- The effect of varying trailing edge sweep angle from zero to 0.262 rad (15°) is available on baseline B, takeoff flaps, with the standard third-flap gap. As the following table shows, the indications are that sweep is favorable at flyover and unfavorable 0.524 rad below the wing. The increments are small, however, and the true effect is probably negligible.

Effect of Trailing Edge Sweep on PNLM

Angle below wing, rad	1.572 (Flyover plane)		0.524 (30° sideline plane)	
V_j, m/s	150	250	150	250
Effect of 0.262 rad T.E. sweep, PNdB	-0.7	-0.3	+0.7	+0.2
No. of tests: swept, unswept	2,1		2,1	
Confidence interval, PNdB	±0.8		±0.8	

Internally-blown configurations.- Table 7-III shows the effect of third-flap internal blowing on PNLM at 150 and 250 m/s primary jet velocity, V_j, and on V_j exponent. Bleed flow as a percentage of total engine airflow (fan plus primary) is shown in parentheses, assuming full spanwise coverage (wing-span less 15% for fuselage etc.) of the reference aircraft. Bleed percentages up to 11.6% were tested but percentages above about 5% are unrealistic because the fan bleed air ducts get too big in the critical segment between the fan nozzle and the wing trailing edge.

The V_j exponents of table 7-III were calculated by curve-fitting PNLM against V_j without regard to the velocity of the third-flap slot efflux; thus the V_j exponent decreases when slot noise begins to make itself heard above primary jet and flap interaction noise, since slot efflux noise is independent of V_j. With the narrowest slot (0.064 cm), the V_j exponent begins to fall off at a slot velocity of about 200 m/s. As the slot gets wider and louder it makes its effect on V_j exponent evident at progressively lower slot velocities.

At an engine nozzle velocity, V_j, of 150 m/s, zero-bleed jet/flap interaction noise is relatively low, and blowing from the third flap almost invariably causes an increase in PNLM, regardless of slot width, location, or velocity. The two decreases (0.2 and 0.3 PNdB) are small compared to the confidence interval of approximately $\pm$ 0.7 PNdB and cannot be considered verified.

At a V_j of 250 m/s, approximately takeoff thrust, all slot locations with triple-slotted flaps show decreases of about 0.5 PNdB at at least one slot velocity. In three of these cases (the two narrower trailing edge slots and the lower-surface slot) the decrease persists over a range of slot velocities, which tends to show that the reductions are real. With trailing edge blowing, the optimum slot velocity decreases as the slot gets wider; it is apparent that trailing edge blowing reduces jet/flap interaction noise but the reduction is soon limited by the noise of the slot itself.

With the flaps faired over, zero-bleed noise at takeoff is lower than with triple-slotted flaps, reducing the opportunity for noise reduction. The narrowest trailing edge slot, however, still shows a decrease of 0.5 PNdB at the optimum slot velocity. The wide trailing edge slot and the slots upstream of the trailing edge show only noise increases.

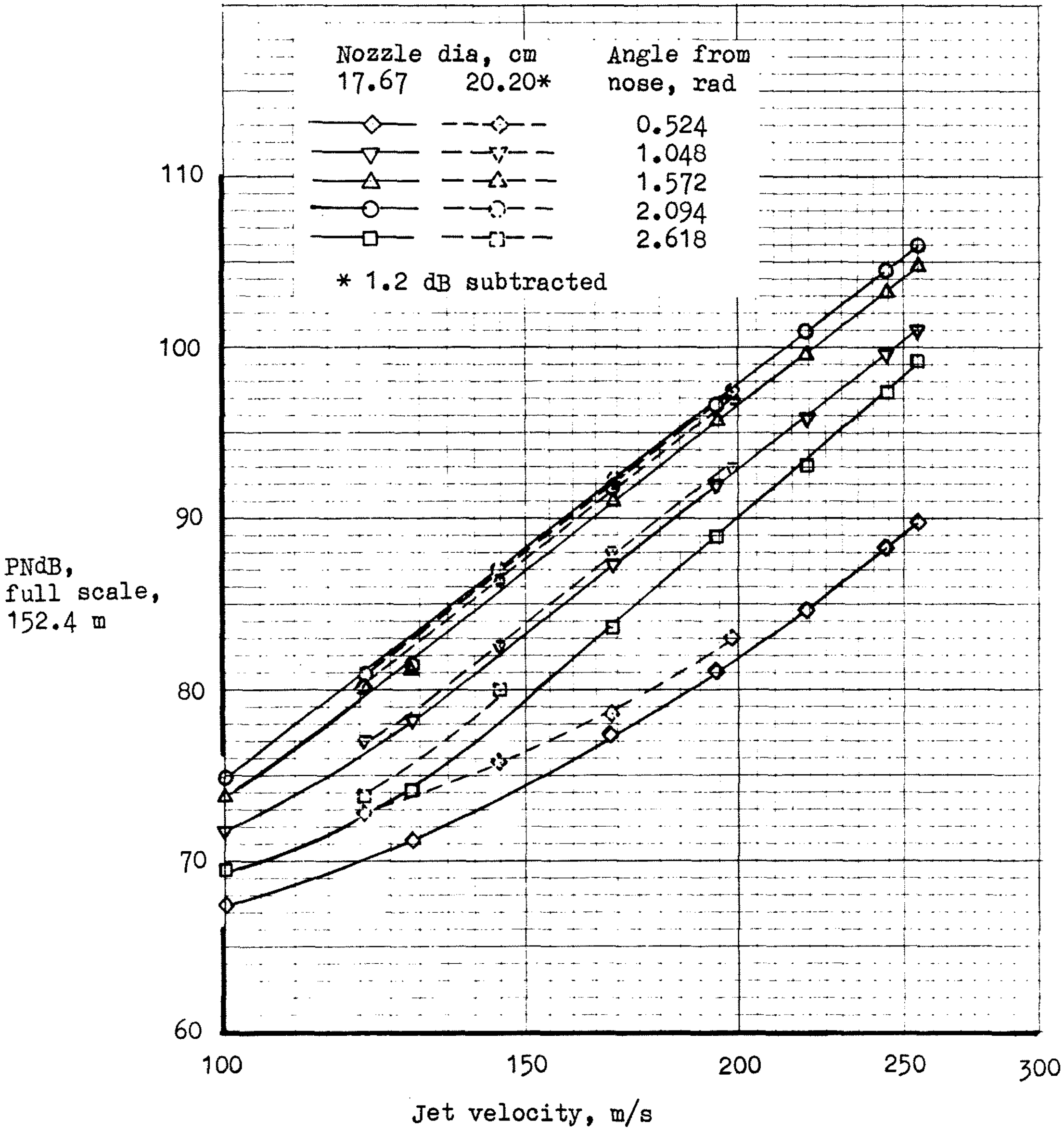
It appears that takeoff noise reductions of approximately 0.5 PNdB are achievable with triple-slotted flaps with blowing from the third flap either at the trailing edge or on the lower surface upstream of the trailing edge, and that similar reductions are achievable with unslotted flaps with trailing edge blowing. The associated bleed requirements for full spanwise coverage

are in the range of 2 to 4% of total engine airflow. Blowing from the upper surface was less effective than from the other locations and was generally detrimental.

Surface Pressure Fluctuations

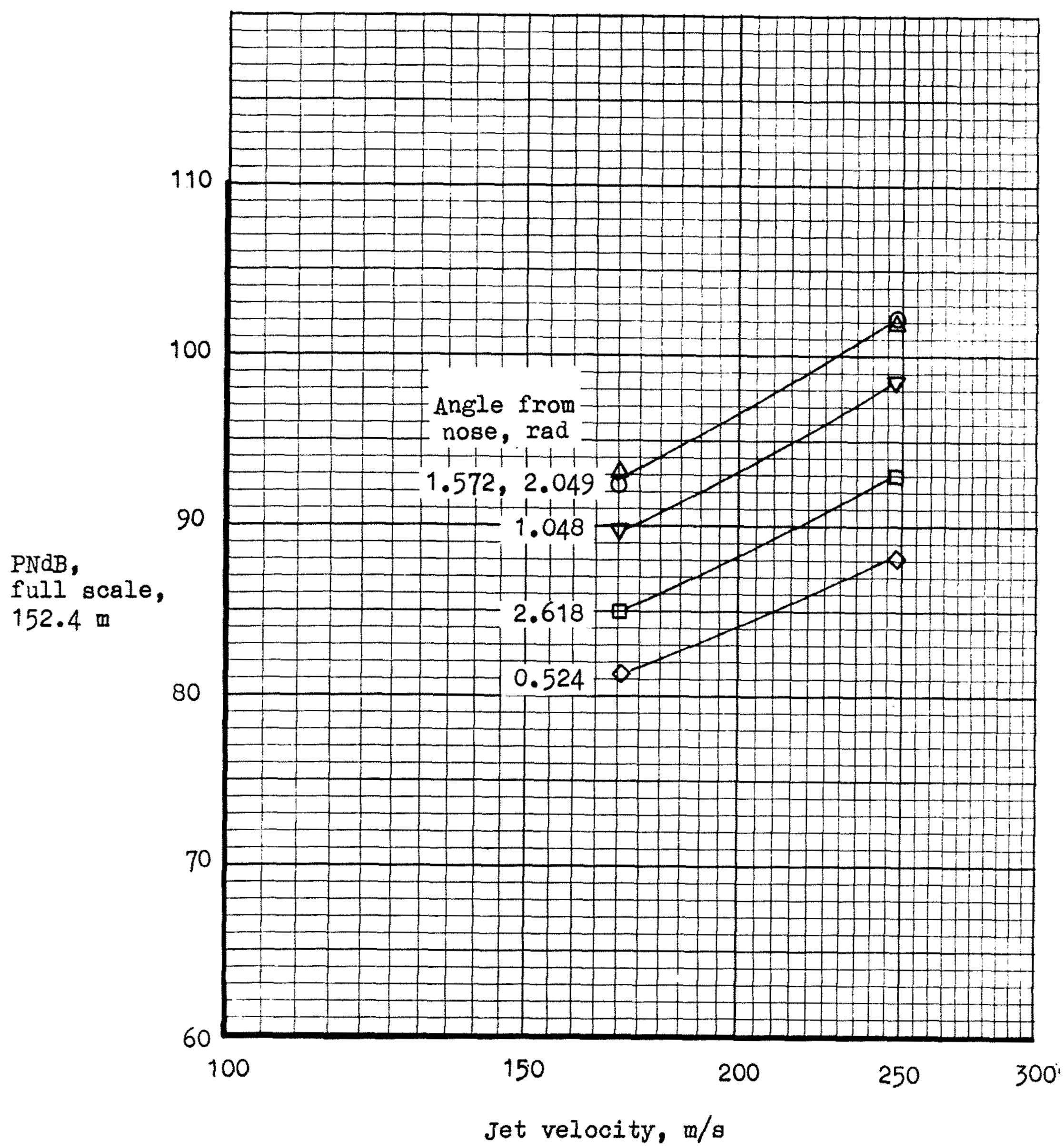
Surface pressure fluctuations along the nozzle centerline plane were measured on selected configurations by means of small high-frequency transducers shown in figure 4-8. Figure 7-13 shows the configurations tested, the transducer locations, and the overall fluctuating pressure levels (OAFPL's) obtained. The transducers and wiring failed progressively during the tests, due to the severe environment of the high-velocity jet, so the later tests covered only a limited number of locations.

Figure 7-14 shows the model-scale surface pressure spectra at one jet velocity for most of the configurations tested. Corresponding far-field spectra from the flyover microphone are also included for comparison. The figures are split into a first-and-second-flap sheet and a third-flap sheet when necessary for clarity.



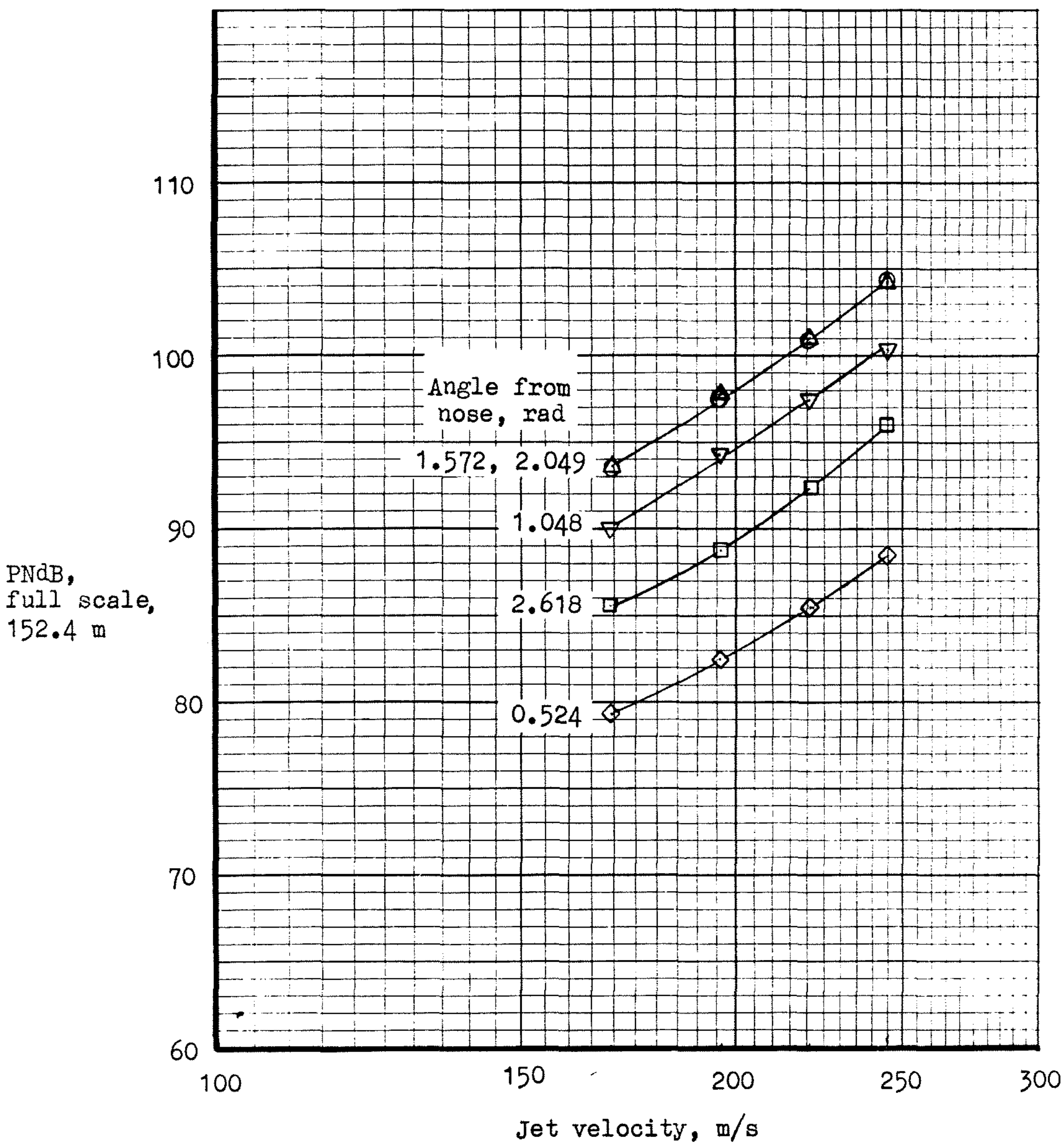
(a) Conical nozzles.

Figure 7-1.- Effect of jet velocity on PNL. Nozzle alone.



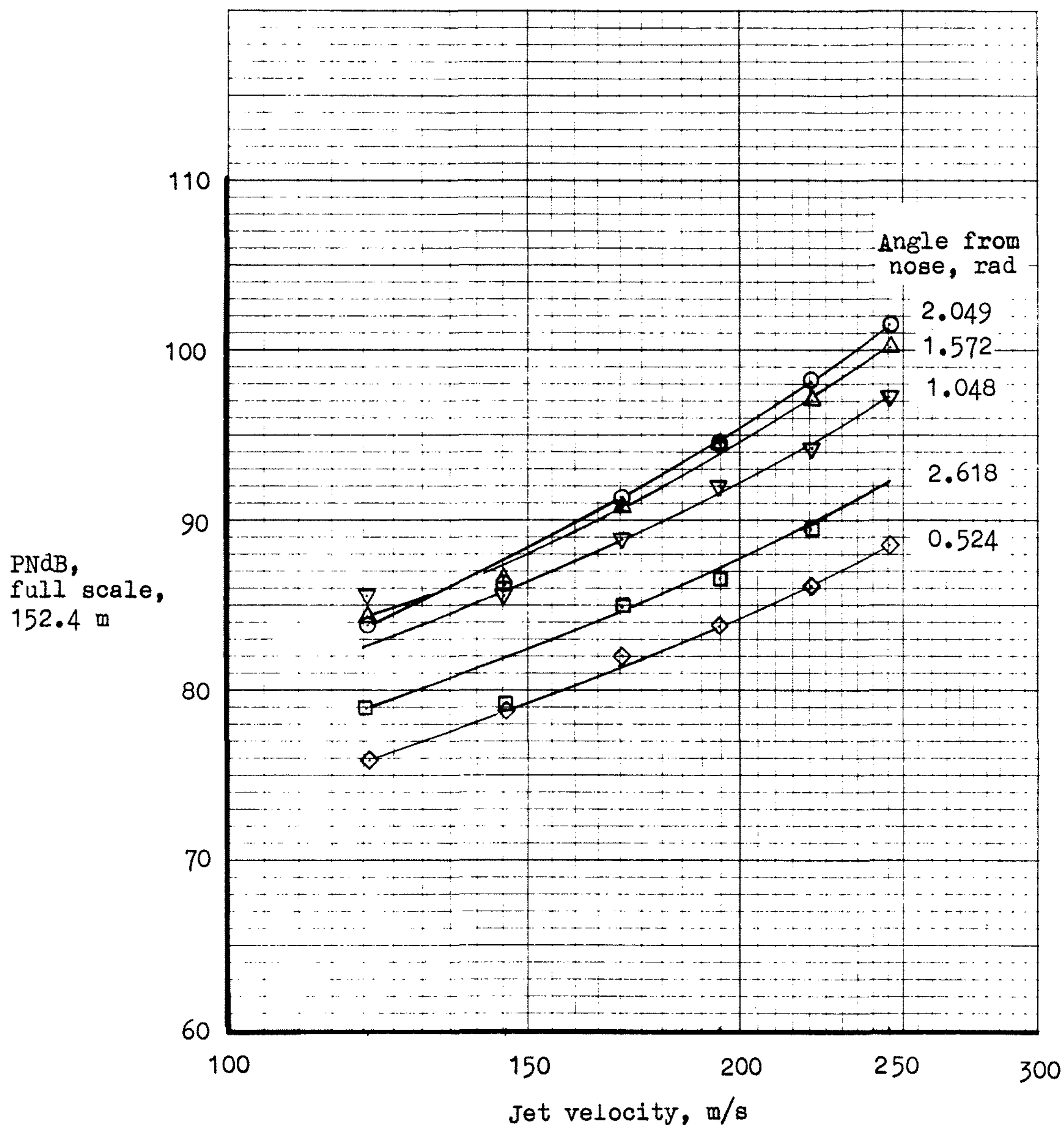
(b) Mixer nozzle.

Figure 7-1.- Continued.



(c) Mixer nozzle with hardwall ejector.

Figure 7-1.- Continued.



(d) Mixer nozzle with treated ejector.

Figure 7-1.- Concluded.

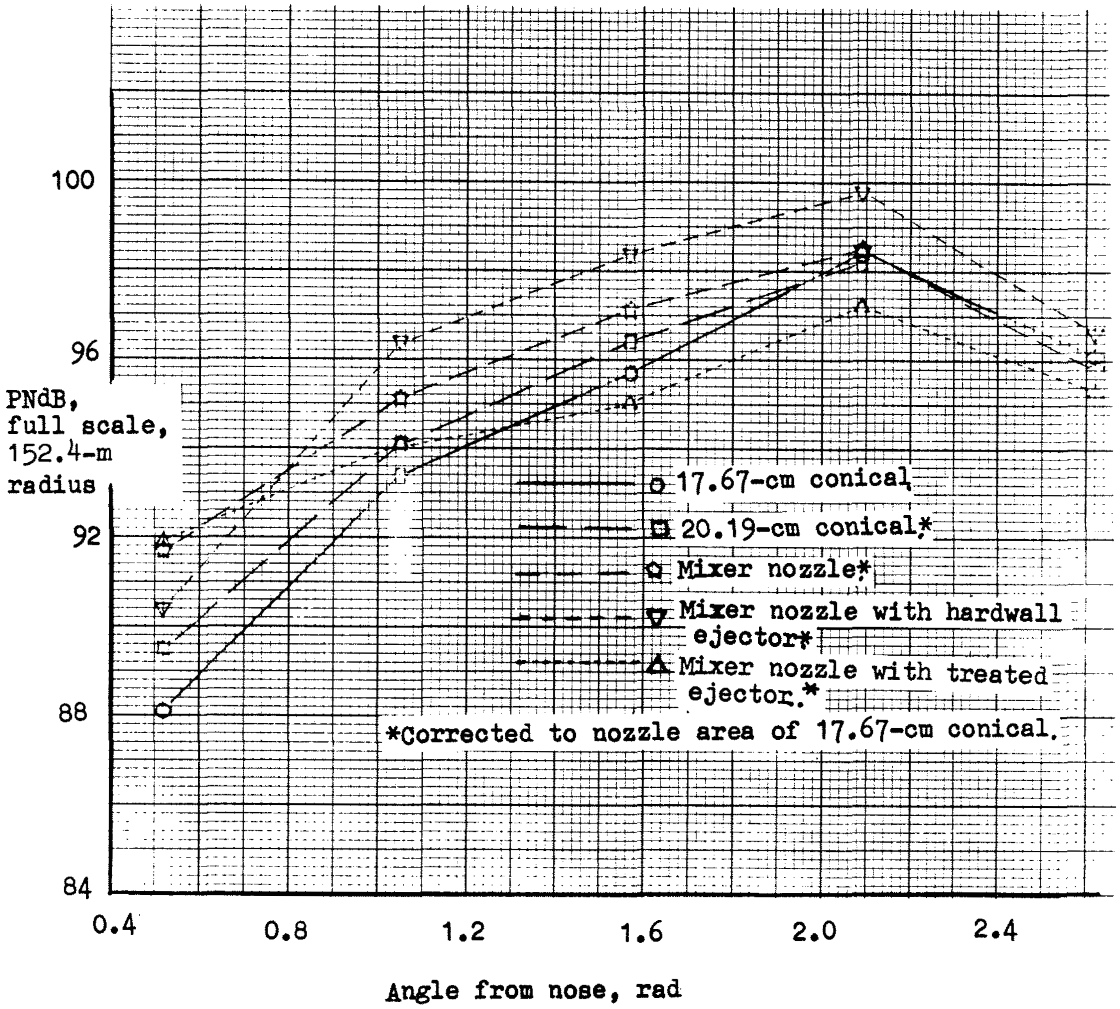


Figure 7-2.- Fore-and-aft directivity, jet-alone noise. V_j = 195 m/s.

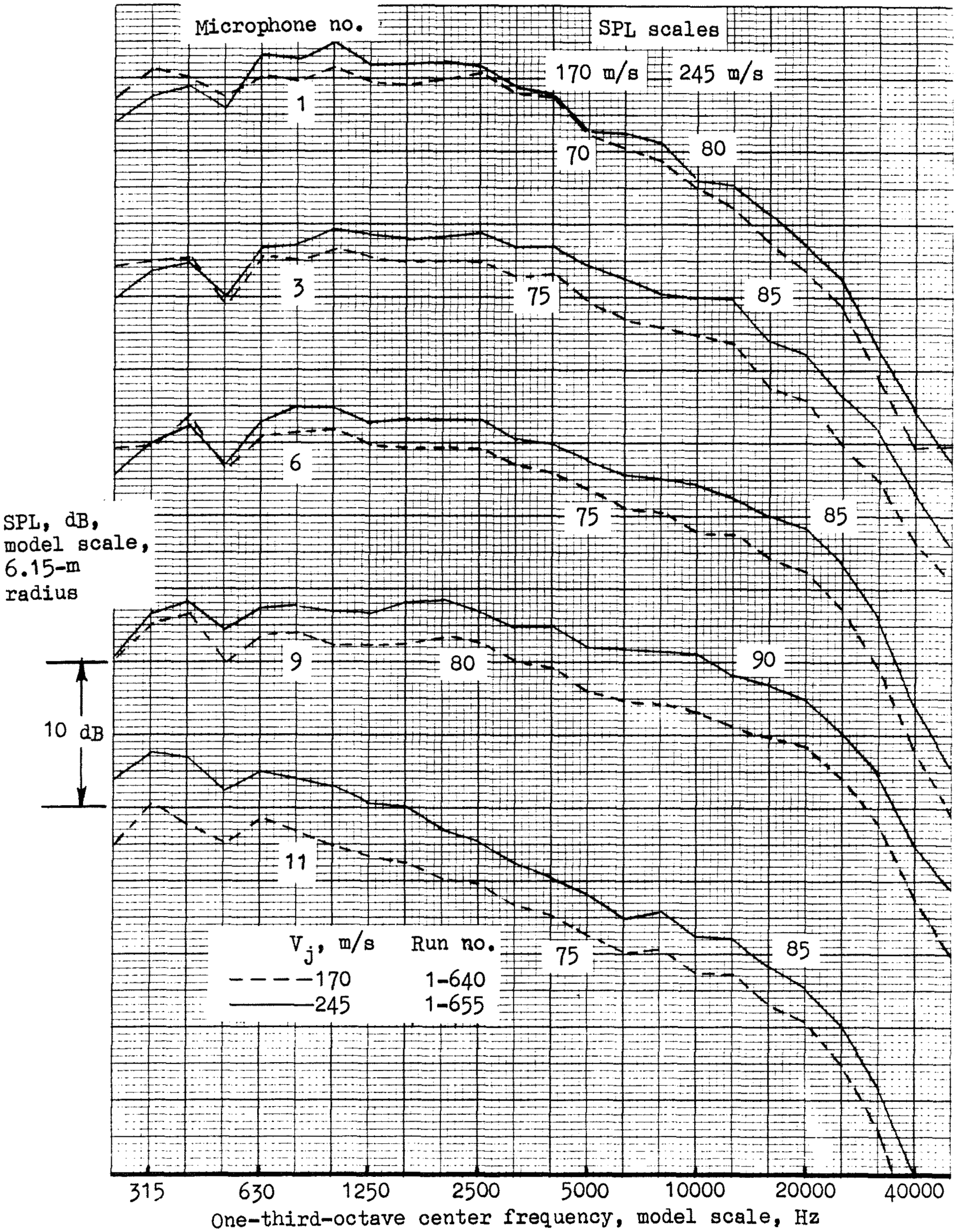
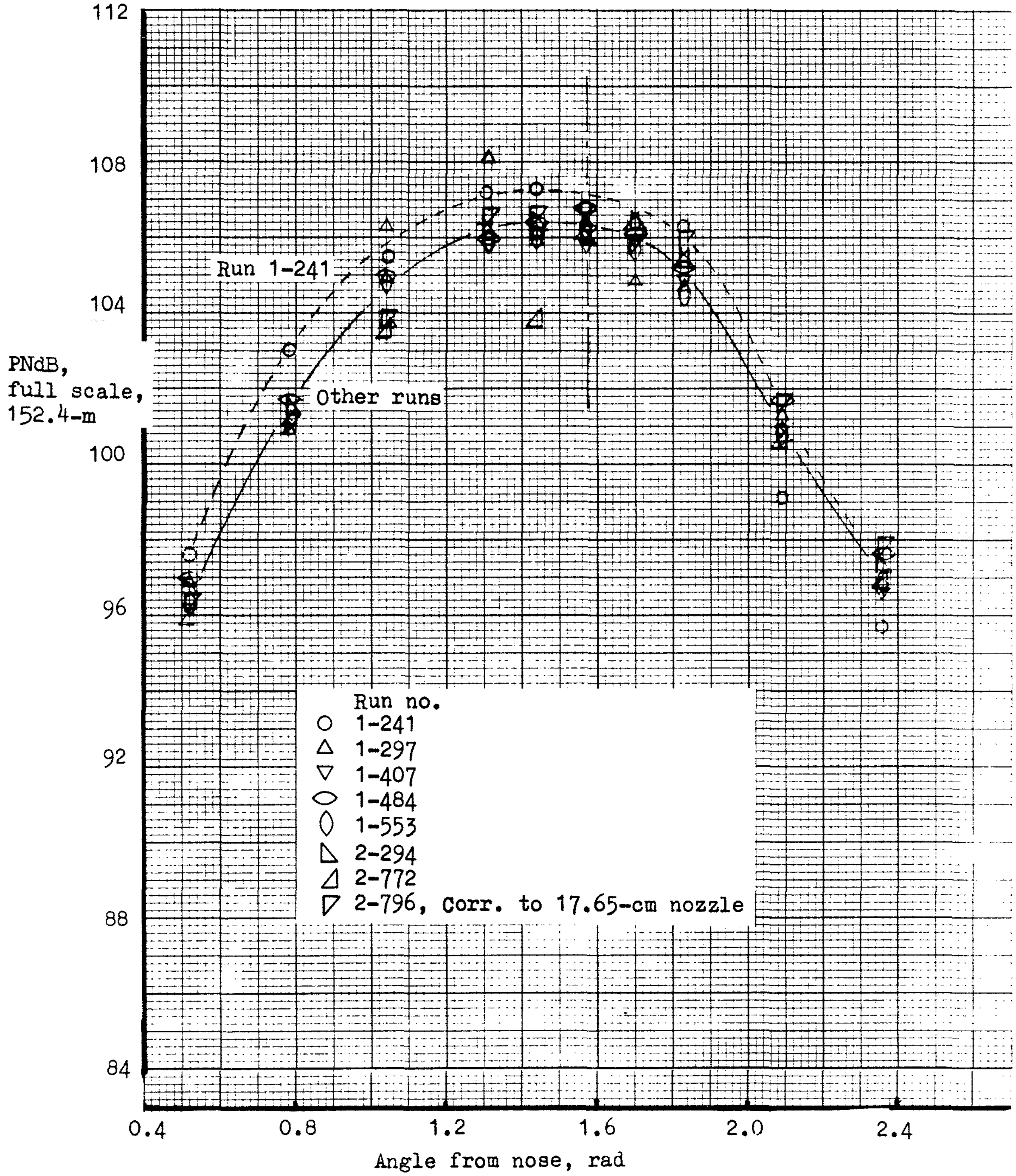
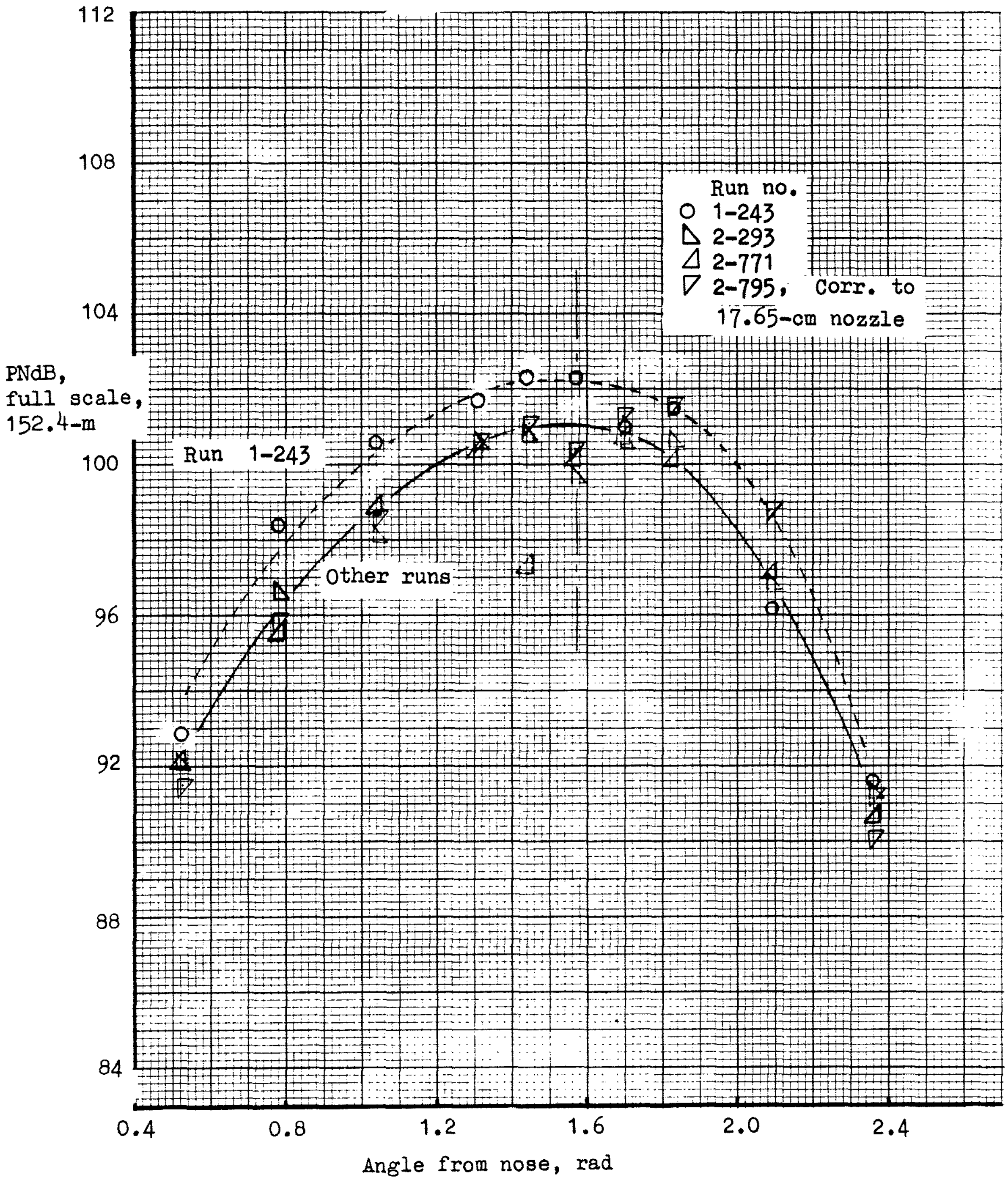


Figure 7-3.- Jet noise spectra, 17.67-cm conical nozzle.



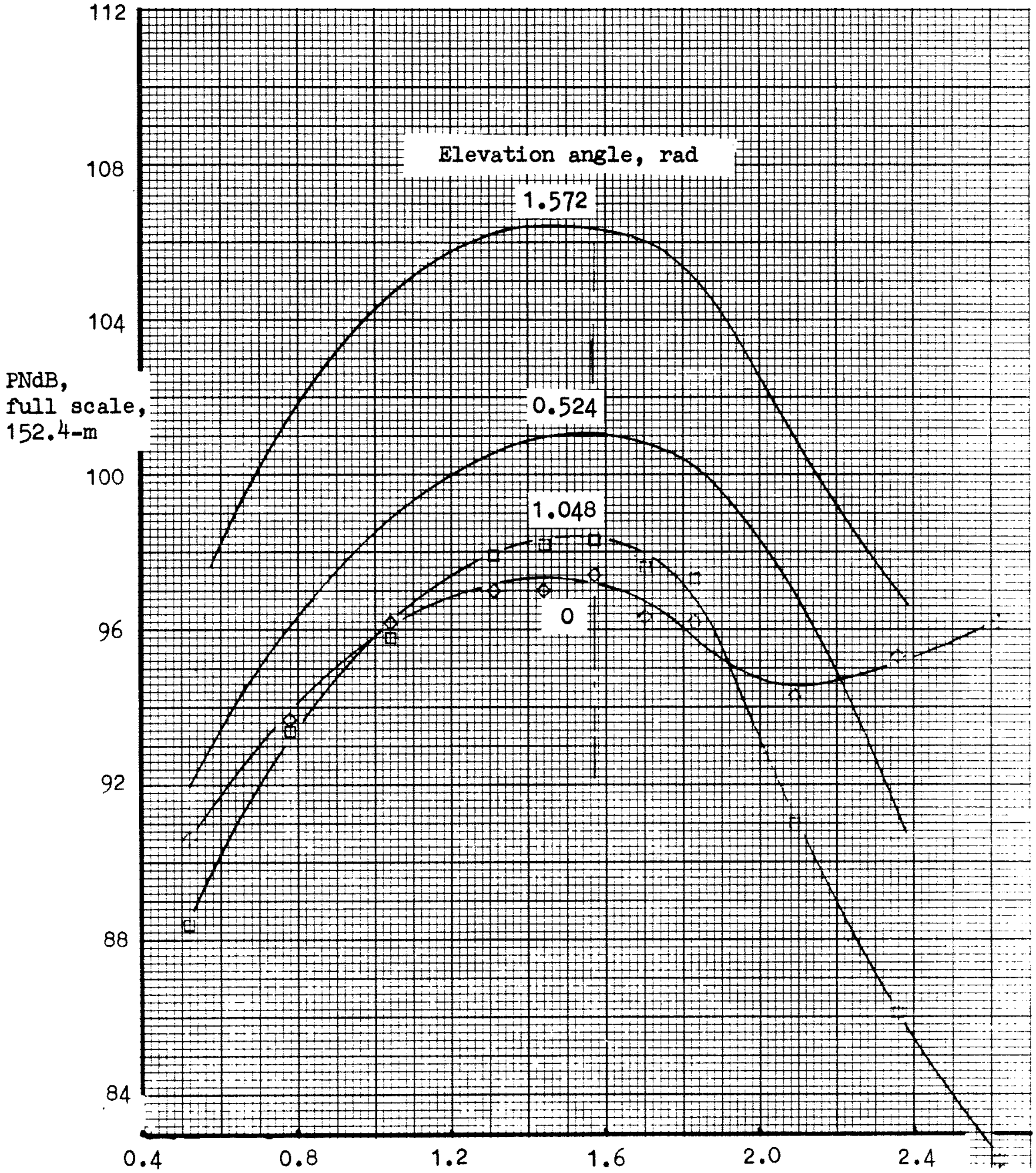
(a) Baseline A, takeoff. Flyover.

Figure 7-4.- Fore-and-aft directivity. V_j = 195 m/s.



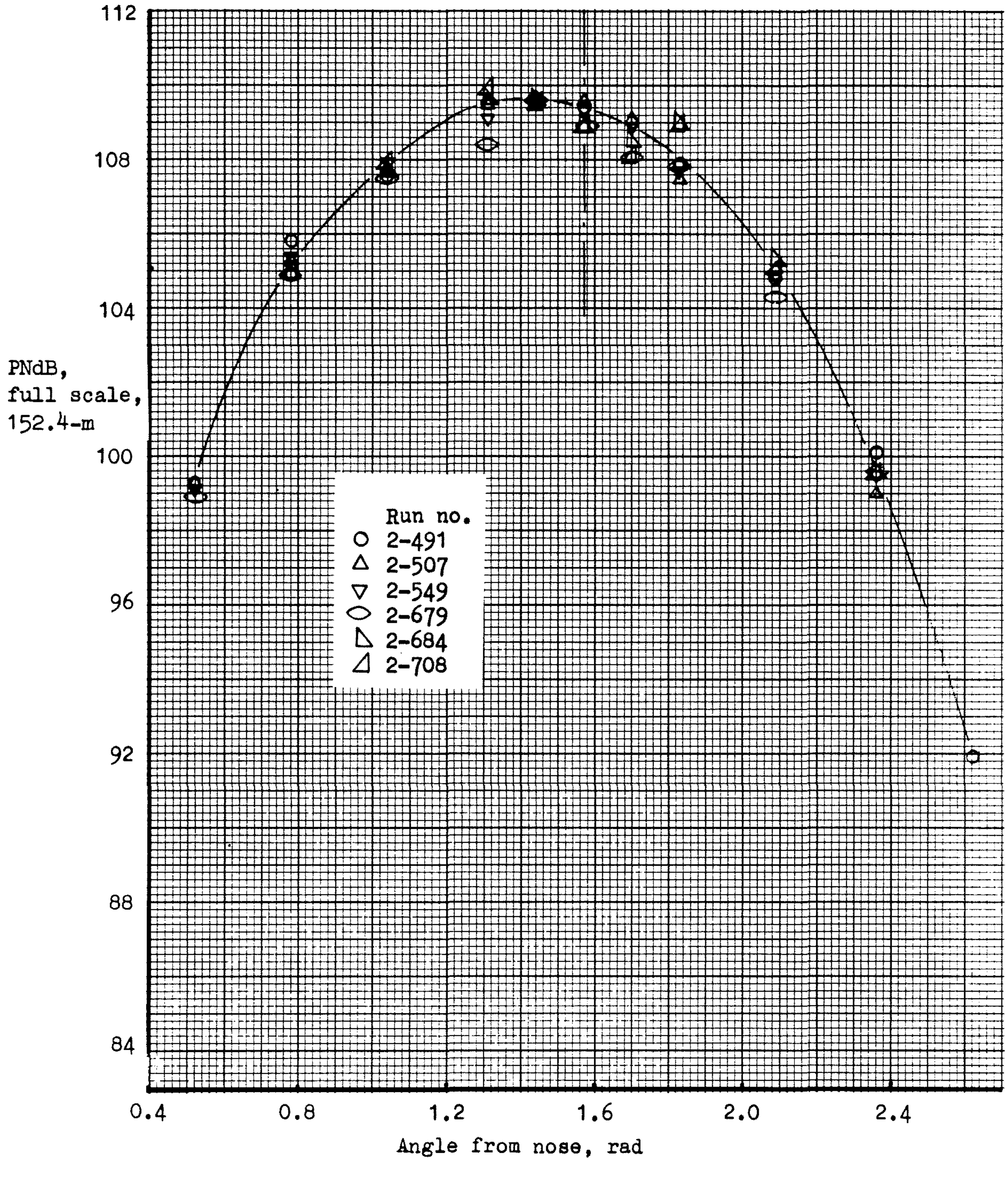
(b) Baseline A, takeoff. 0.524 rad below wing.

Figure 7-4. - Continued.



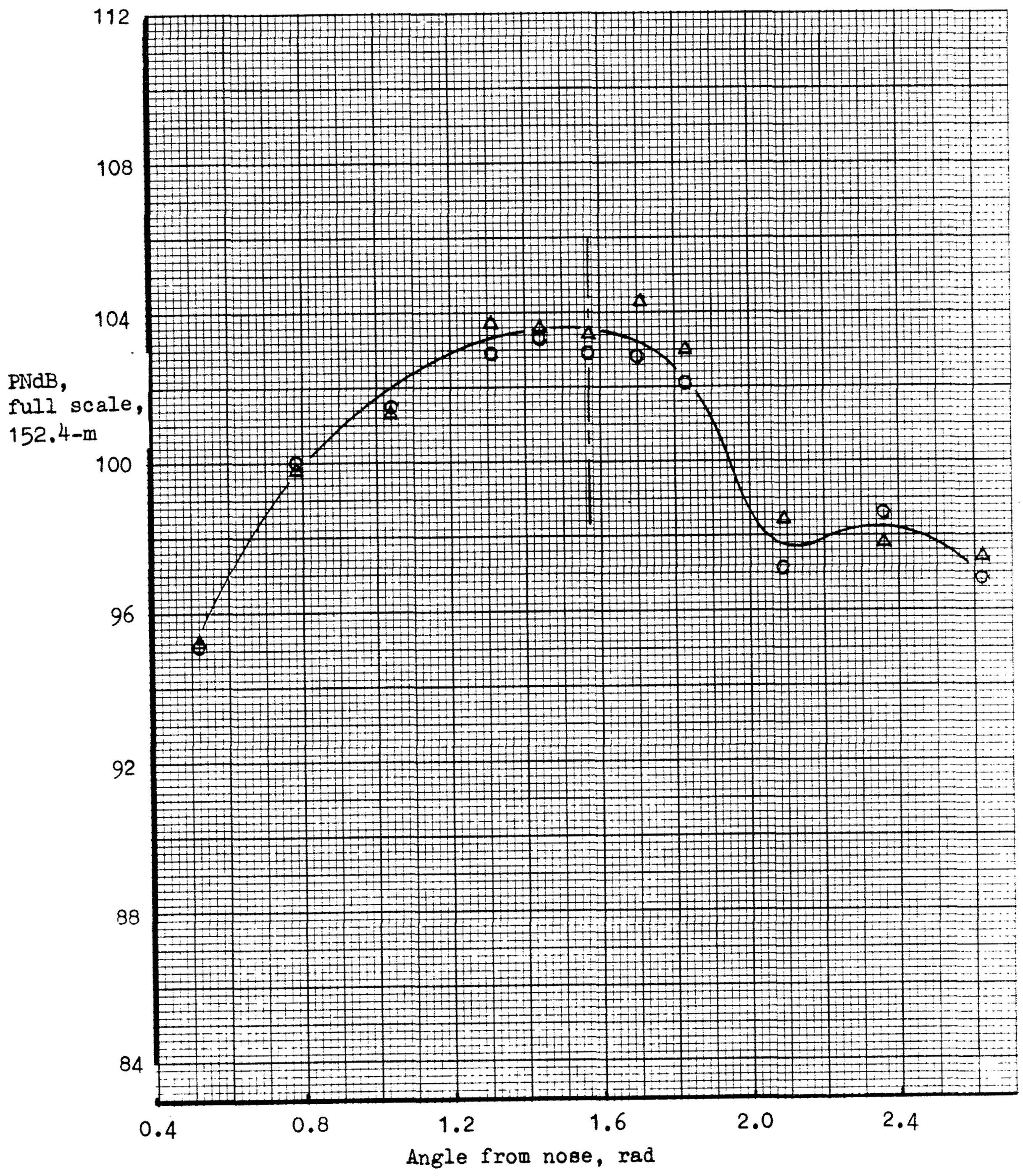
(c) Baseline A, takeoff. Effect of elevation angle.

Figure 7-4. - Continued.



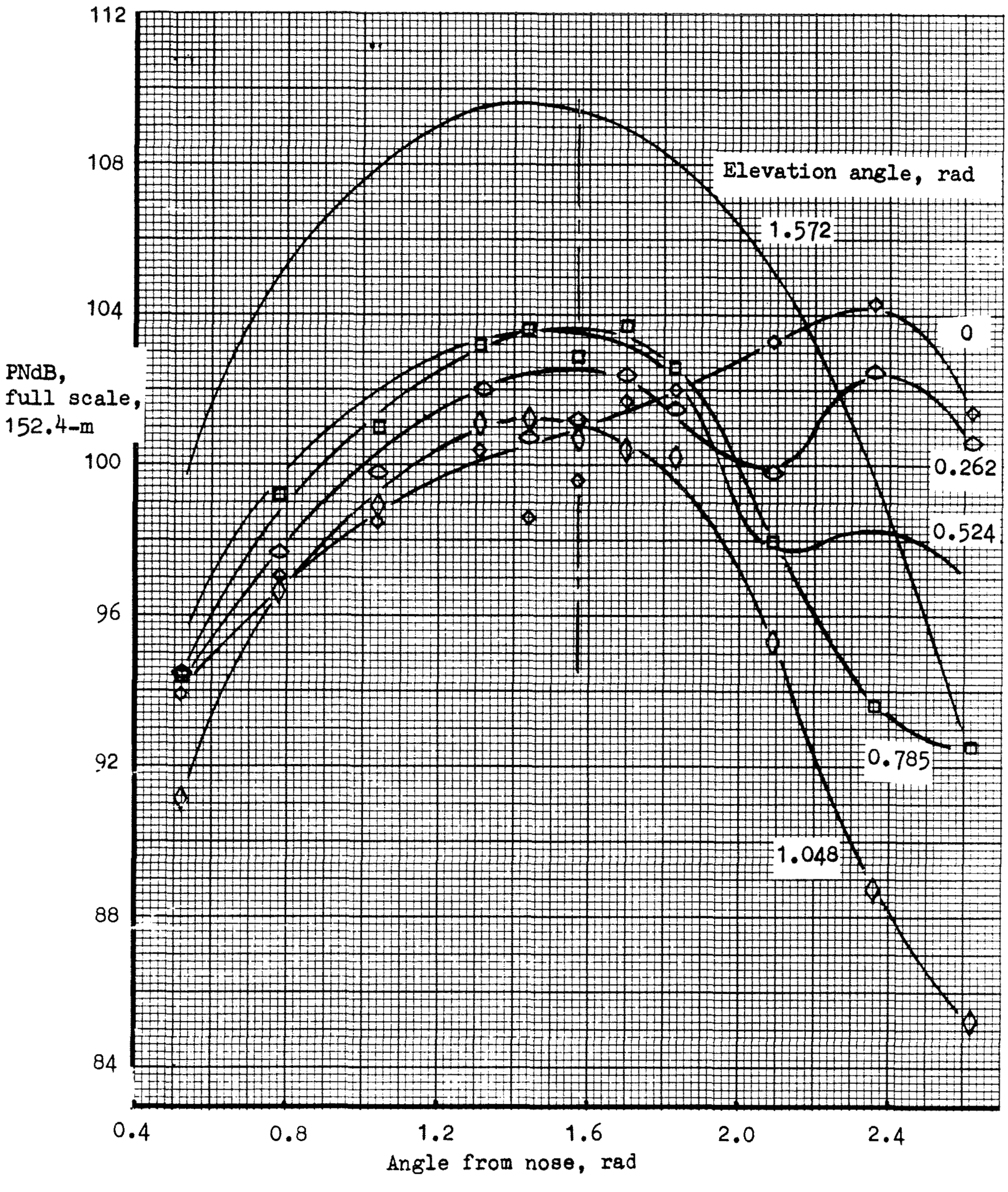
(d) Baseline B, takeoff. Flyover.

Figure 7-4. - Continued.



(e) Baseline B, takeoff. 0.524 rad below wing.

Figure 7-4. - Continued.



(f) Baseline B, takeoff. Effect of elevation angle.

Figure 7-4. - Concluded.

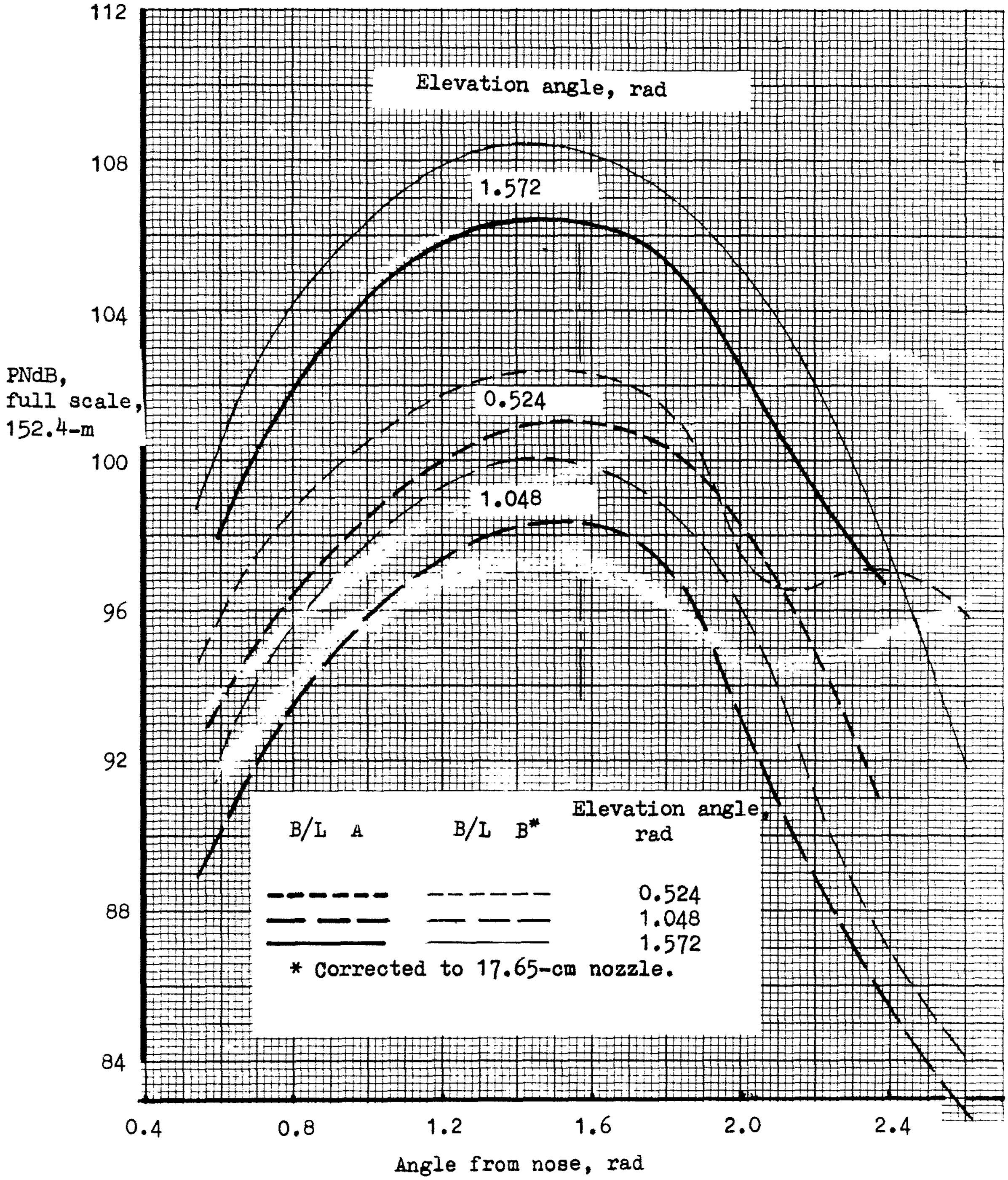


Figure 7-5.-Baseline directivities. Takeoff.

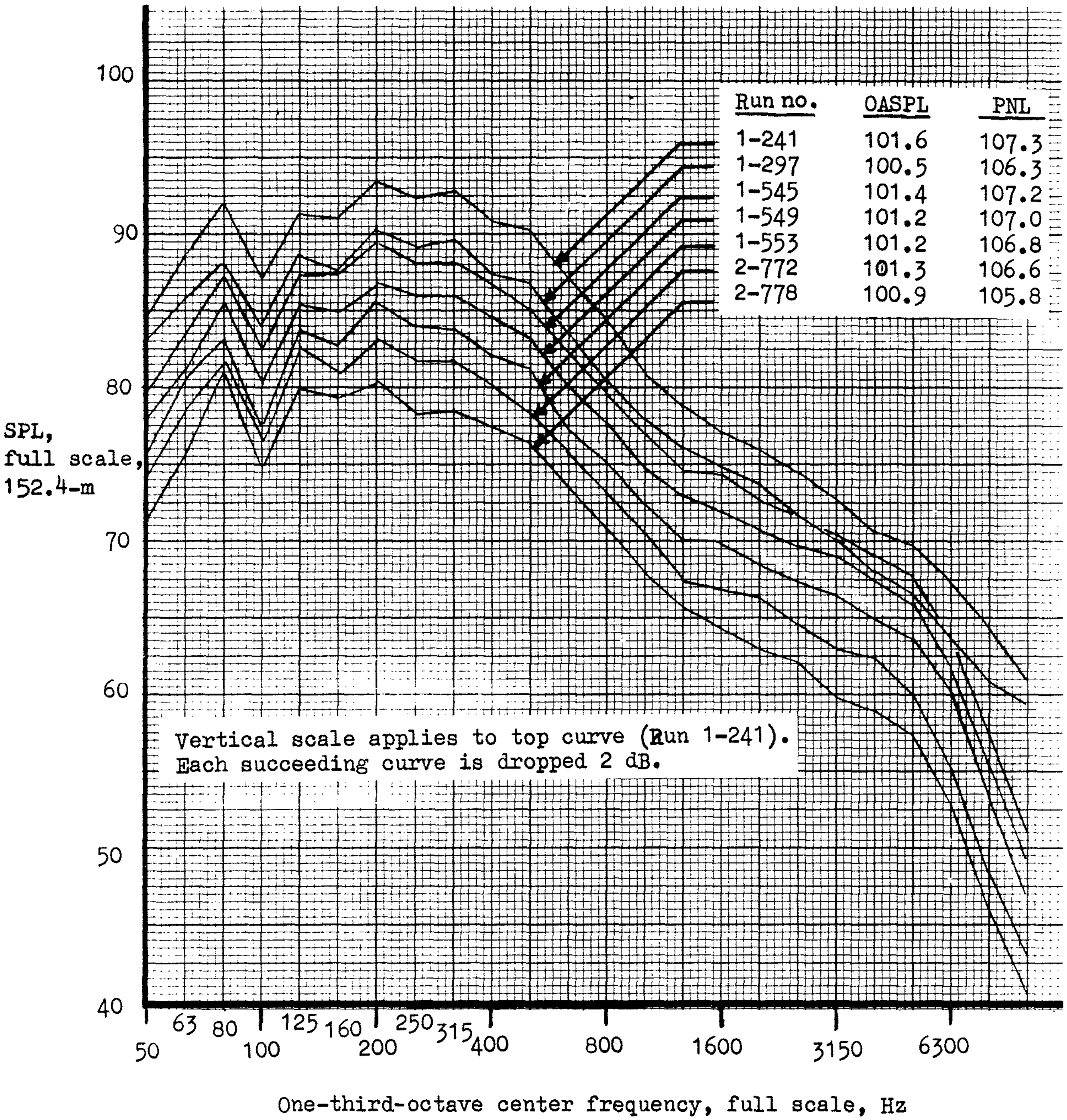
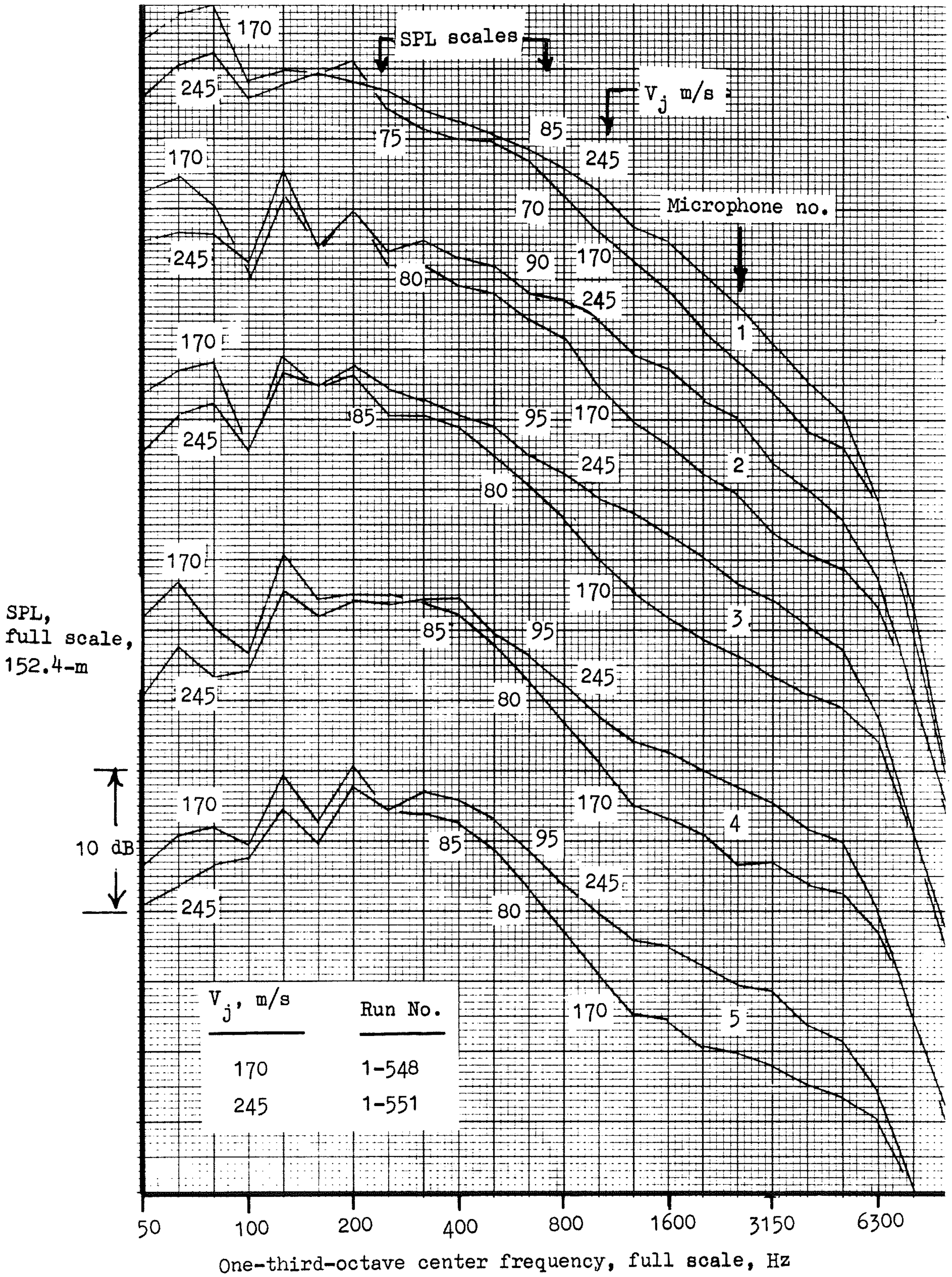
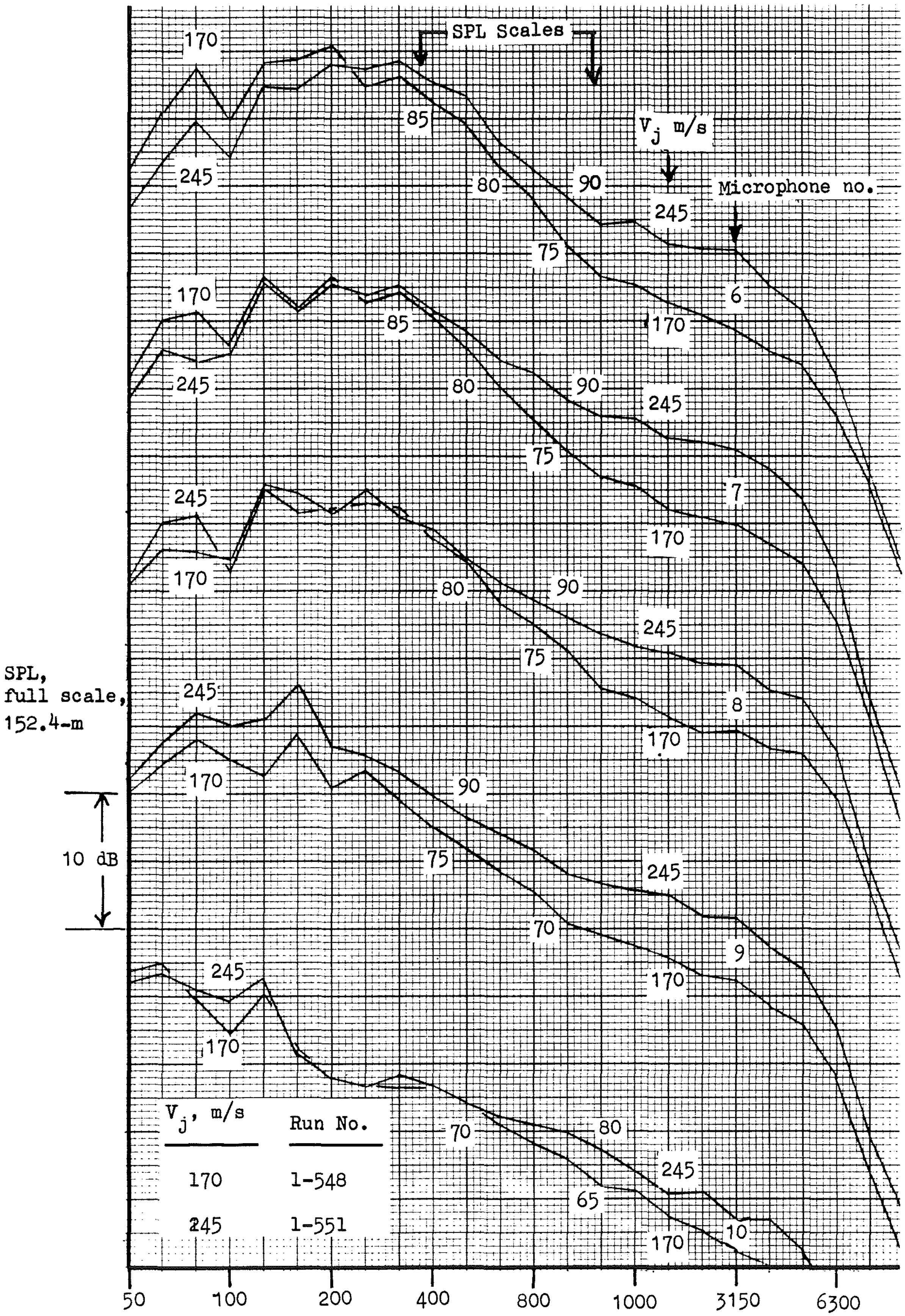


Figure 7-6.- SPL spectra, baseline A, takeoff. Flyover, microphone 6. V_j = 195 m/s.



(a) Microphones 1-5.

Figure 7-7. - SFL spectra, comparison of jet velocities.
Baseline A, takeoff, flyover.

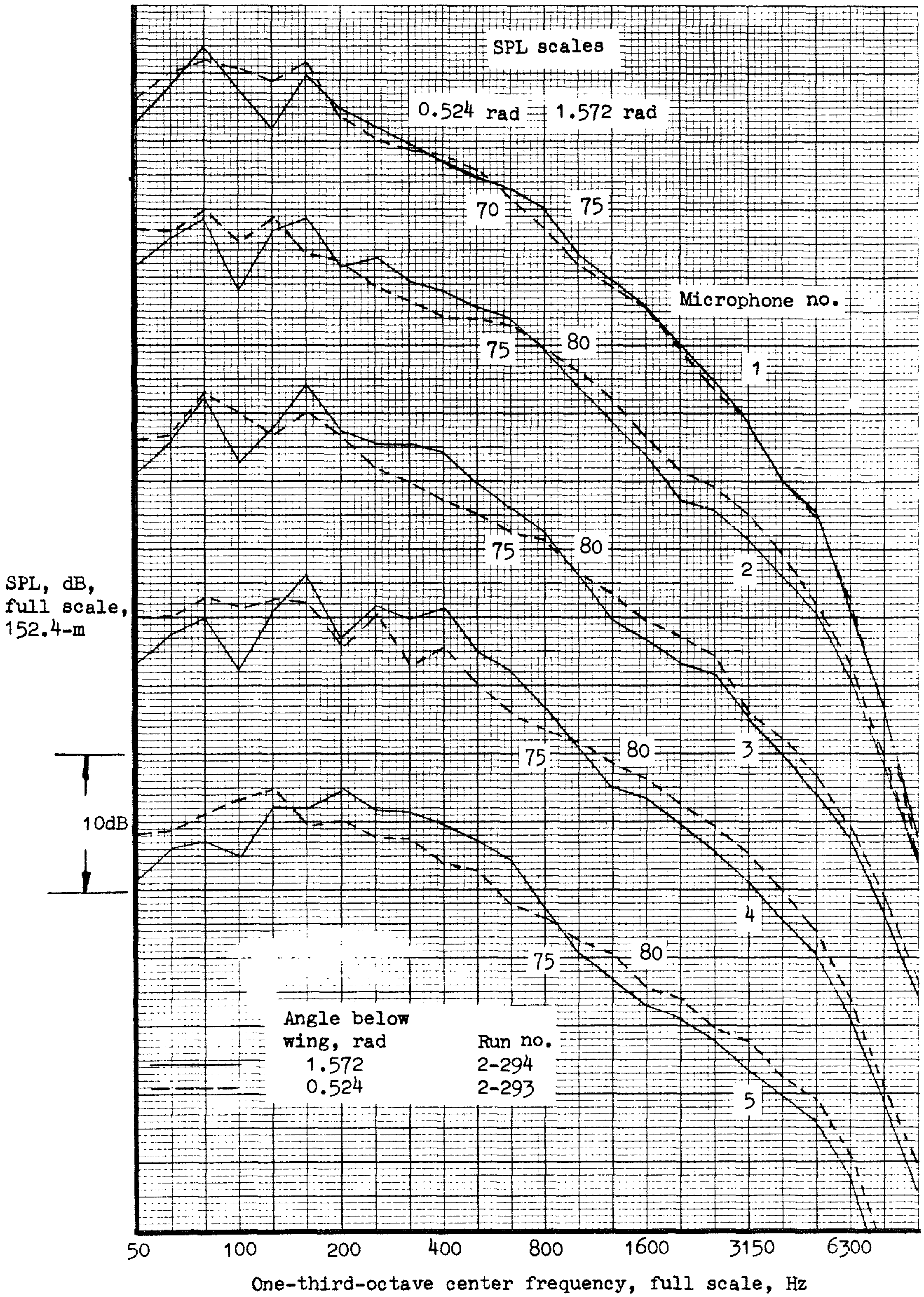


V_j, m/s	Run No.
170	1-548
245	1-551

One-third-octave center frequency, full scale, Hz

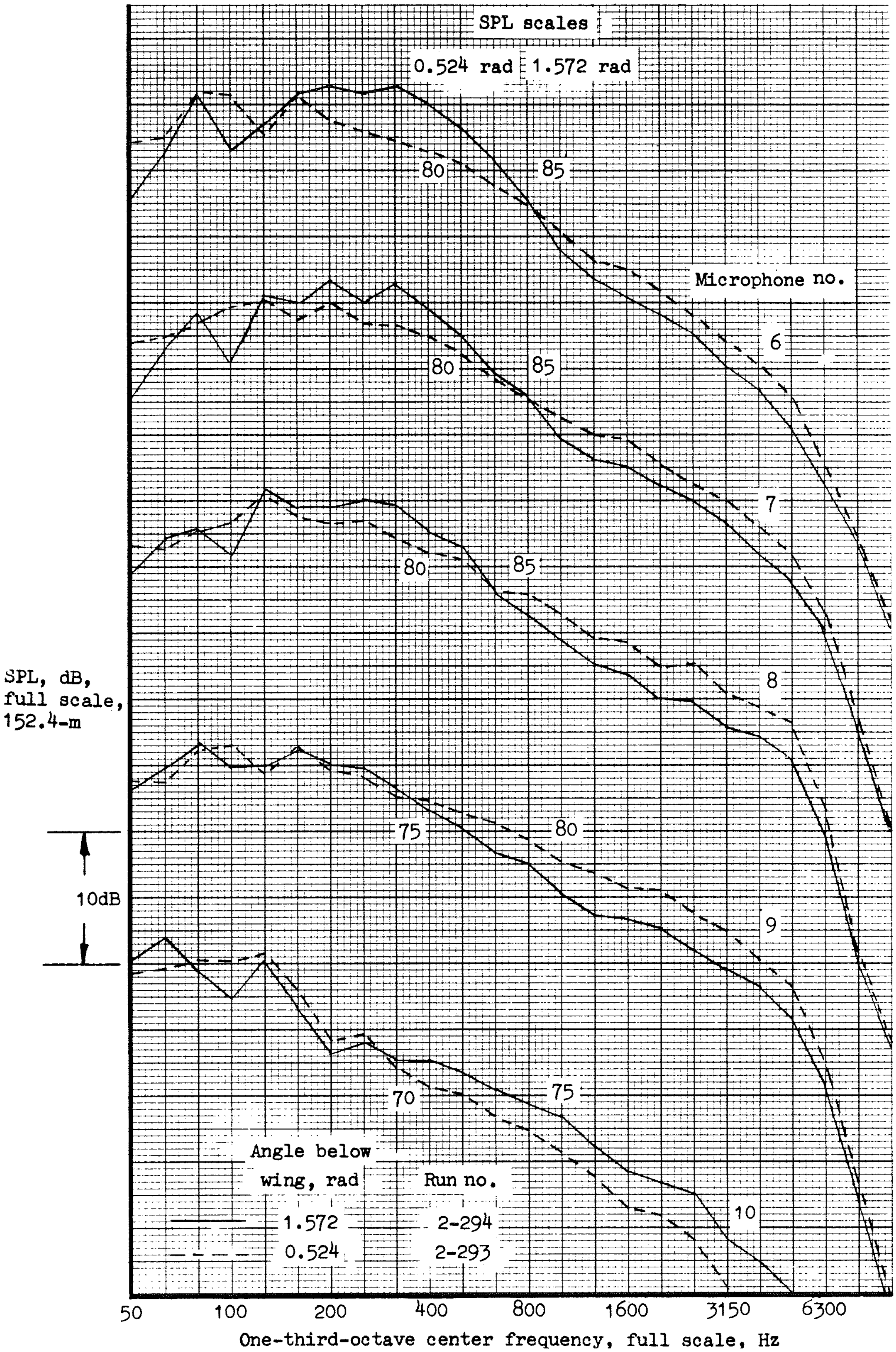
(b) Microphones 6-10.

Figure 7-7.- Concluded.



(a) Microphones 1-5.

Figure 7-8.- SPL spectra, baseline A, takeoff. V_j = 195 m/s.



(b) Microphones 6-10.

Figure 7-8.- Concluded.

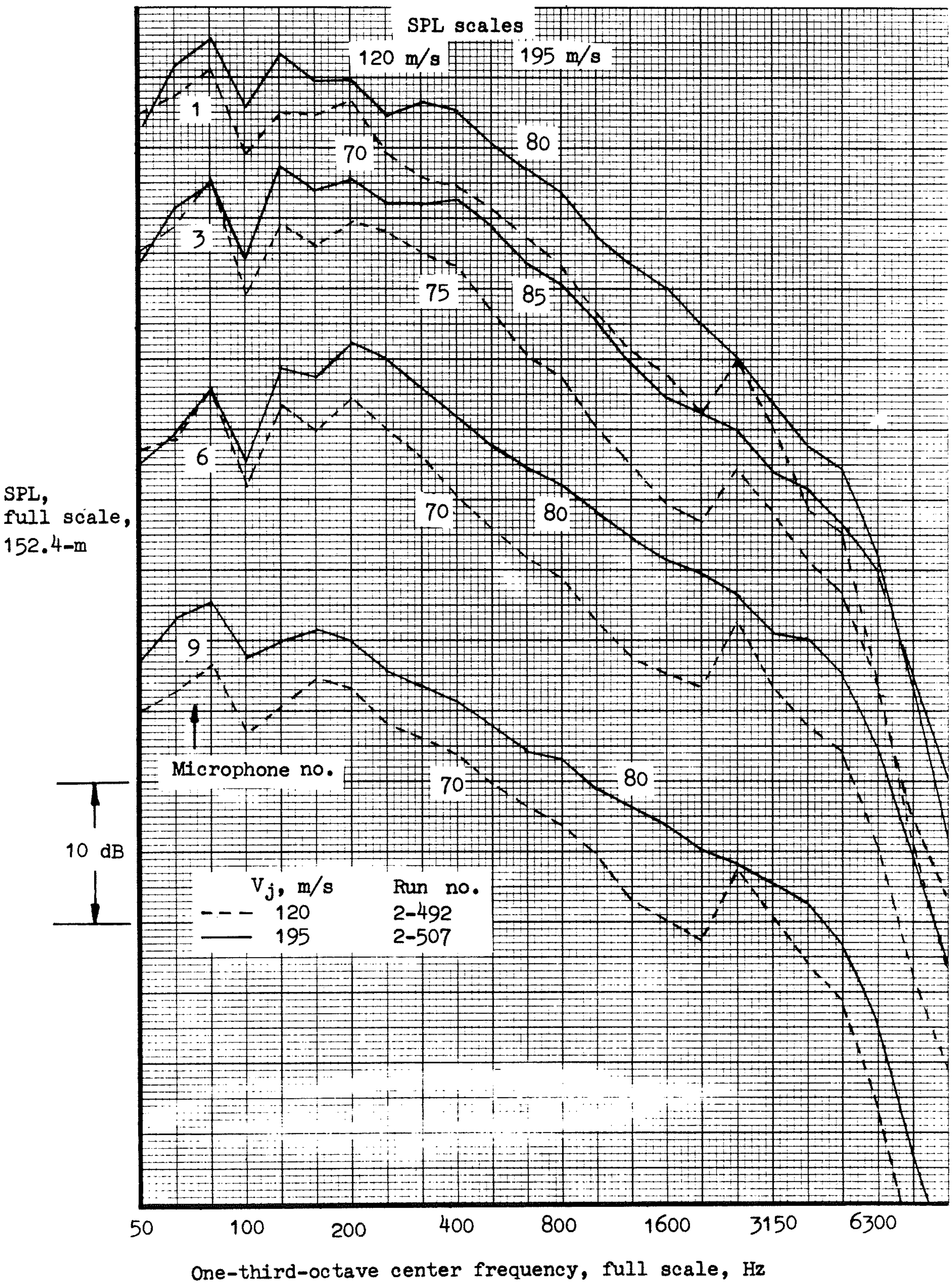
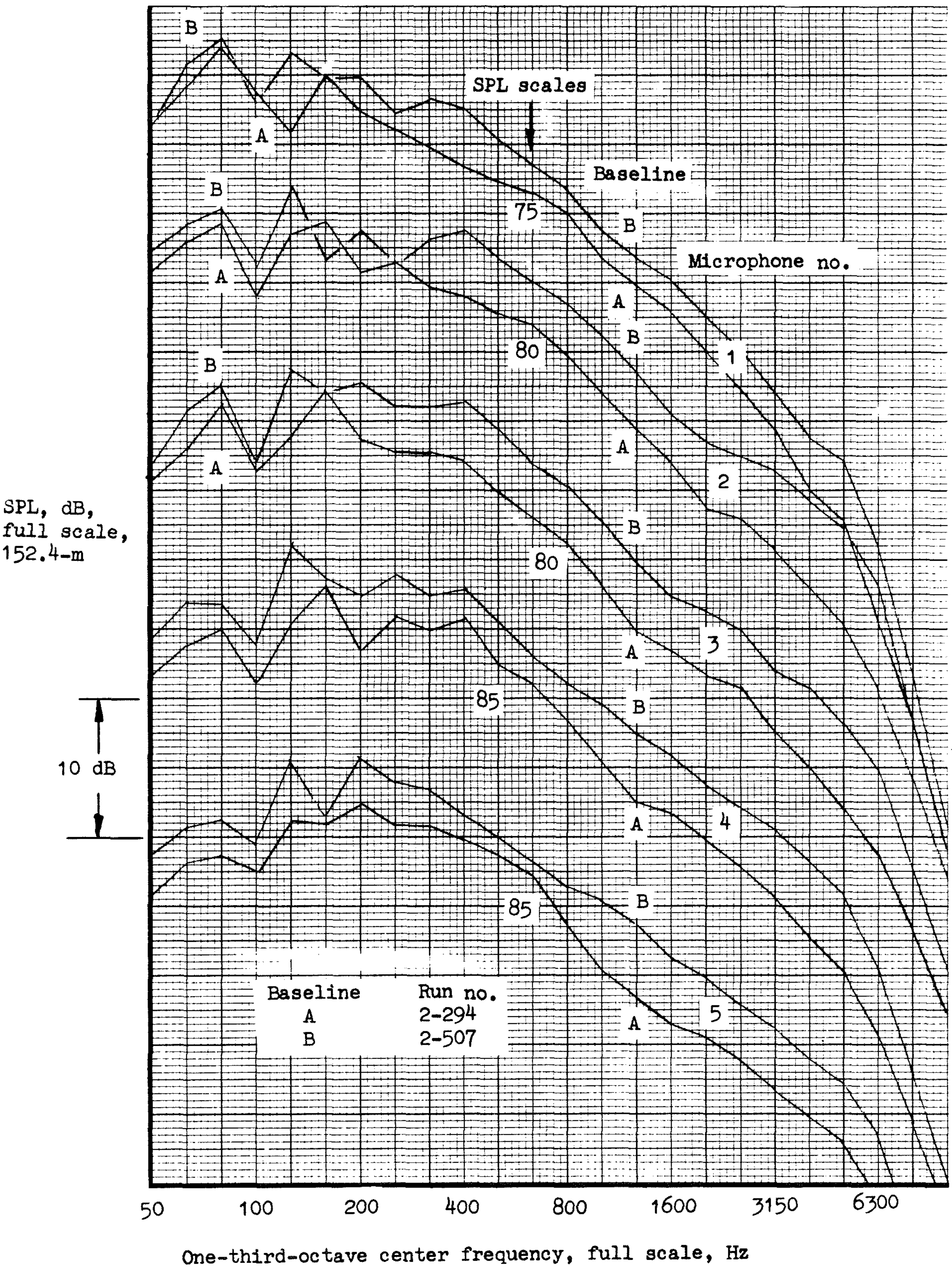
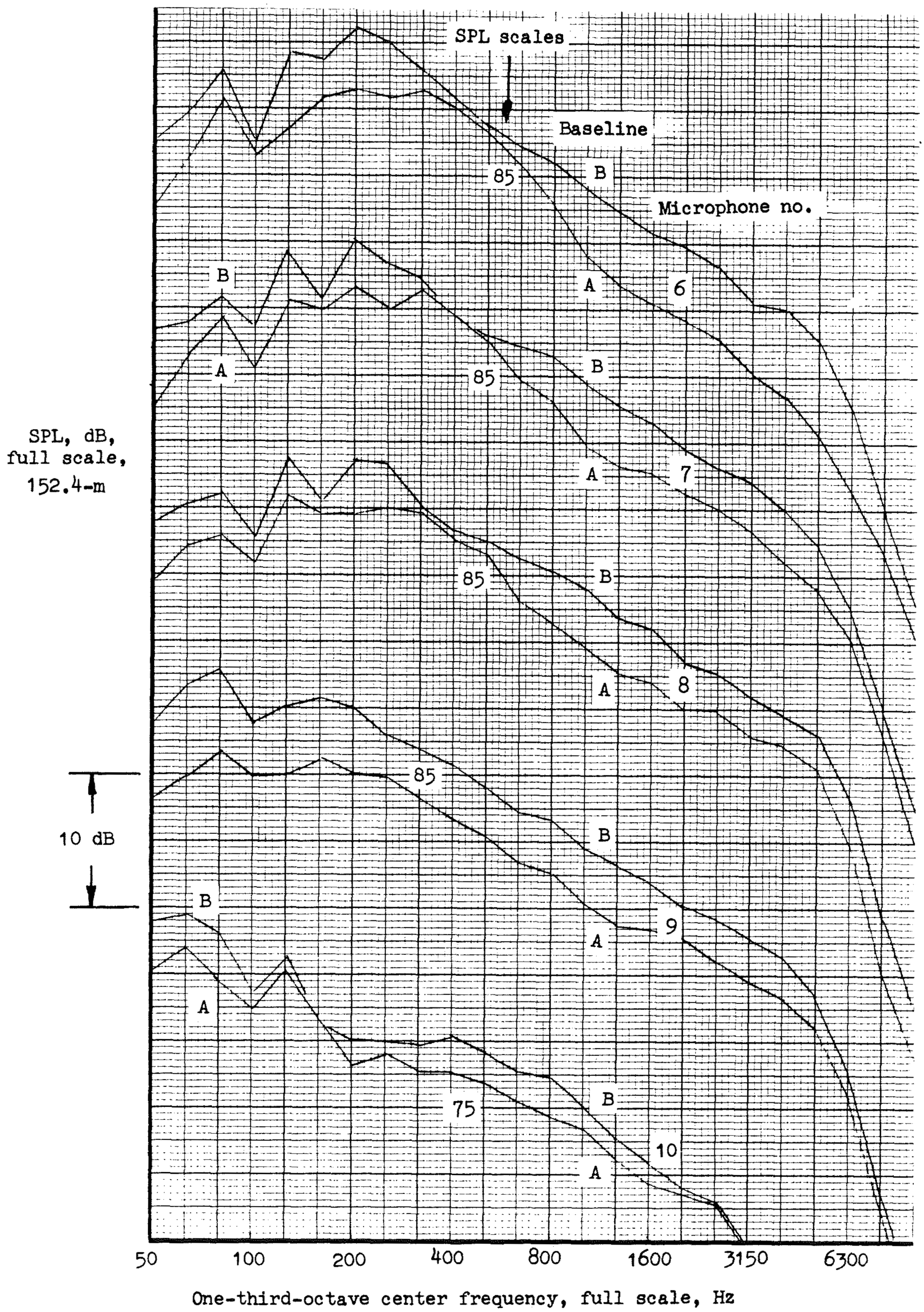


Figure 7-9.- SPL spectra, baseline B, takeoff, flyover.



(a) Microphones 1-5.

Figure 7-10. - SPL spectra, comparison of baselines A and B, Takeoff, flyover.



(b) Microphones 6-10.

Figure 7-10. - Concluded.

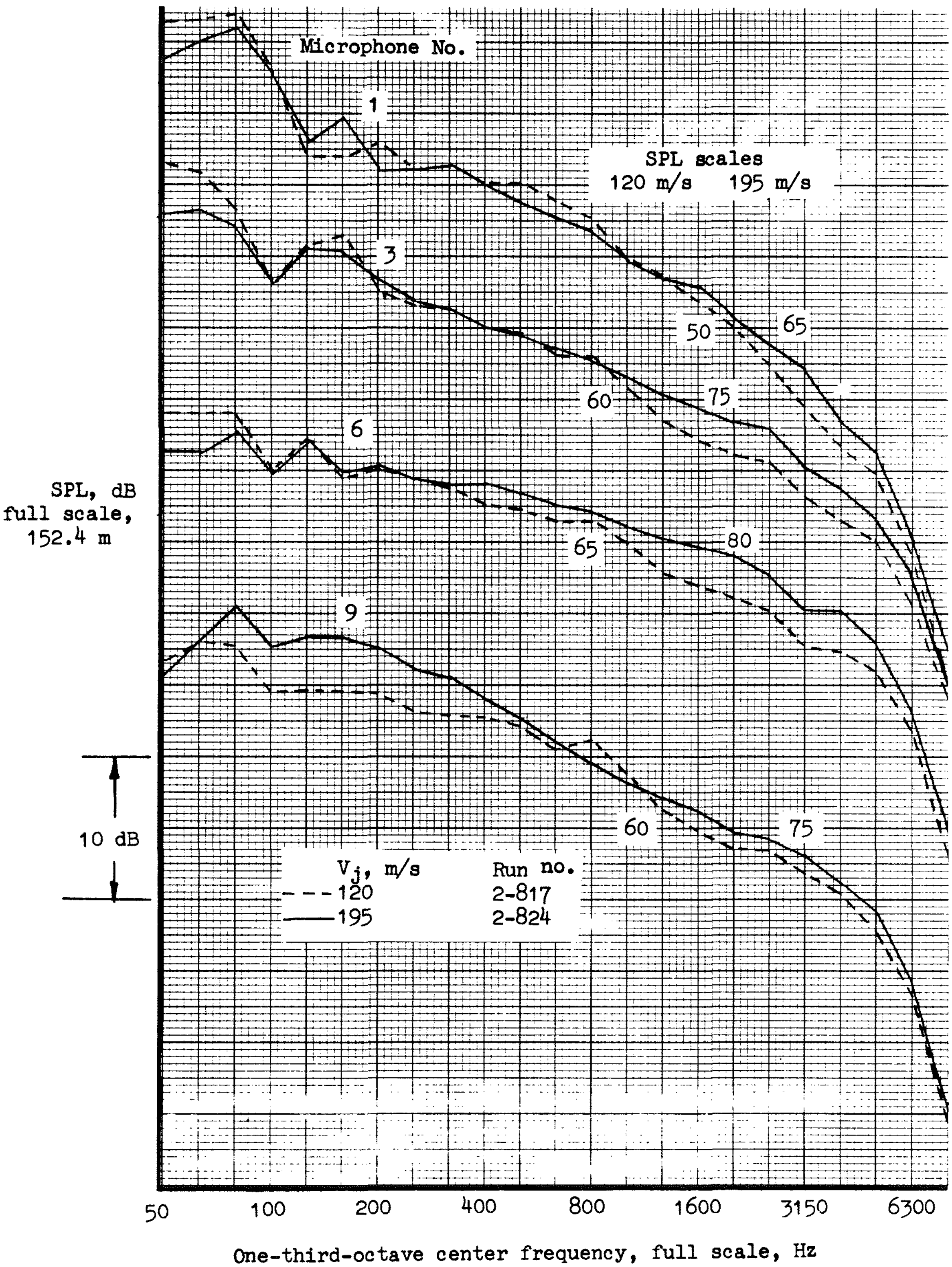


Figure 7-11. - SPL spectra, baseline A with fairing over flap slots. Takeoff, flyover.

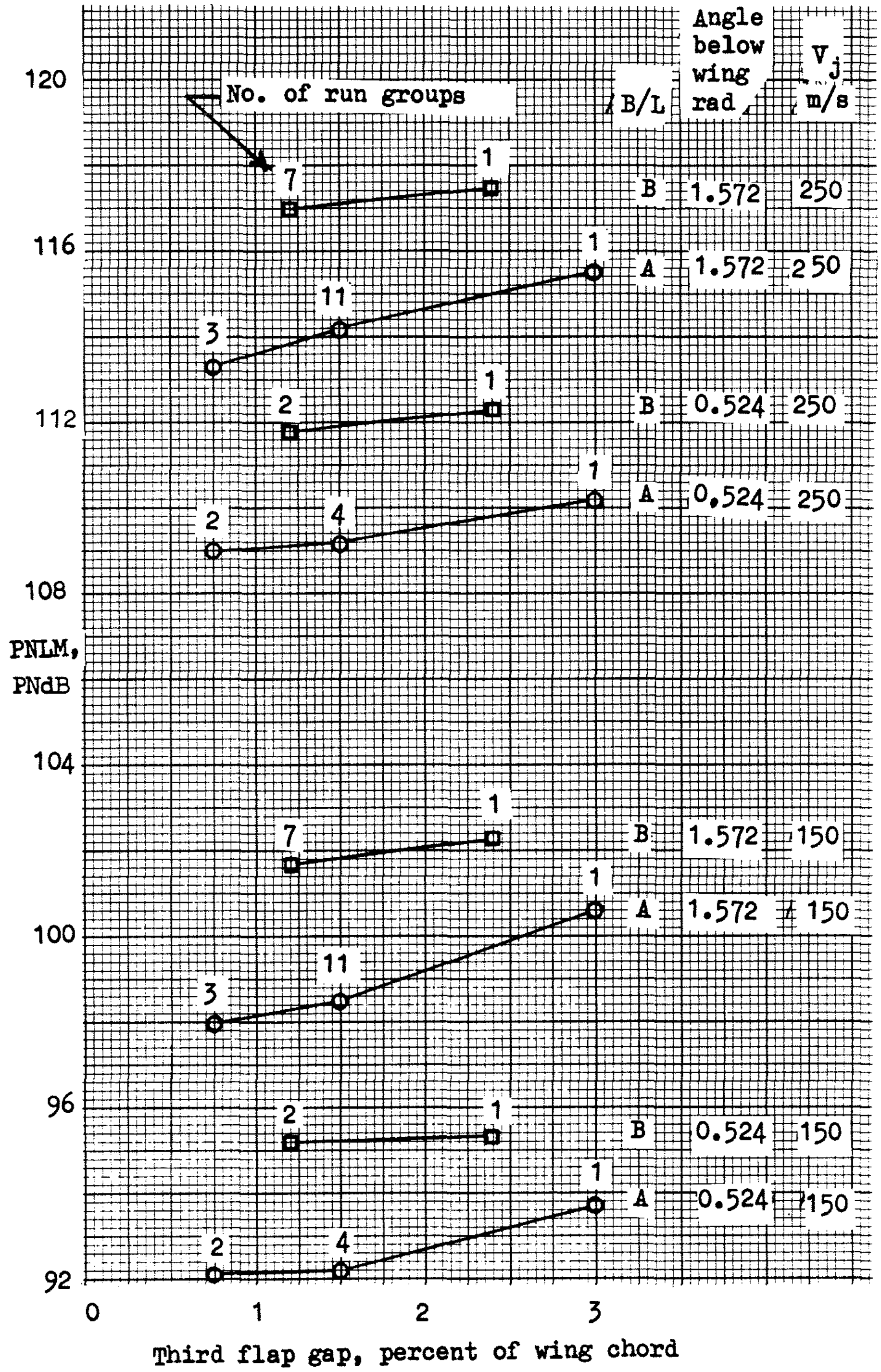
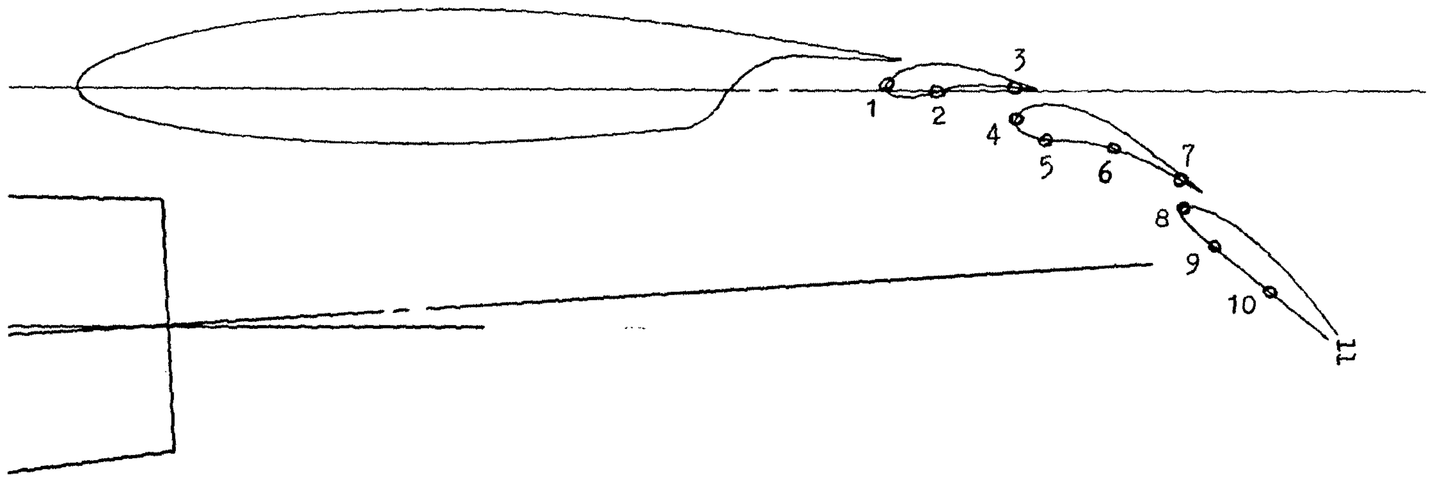


Figure 7-12. - Effect of third flap gap on PNLM.

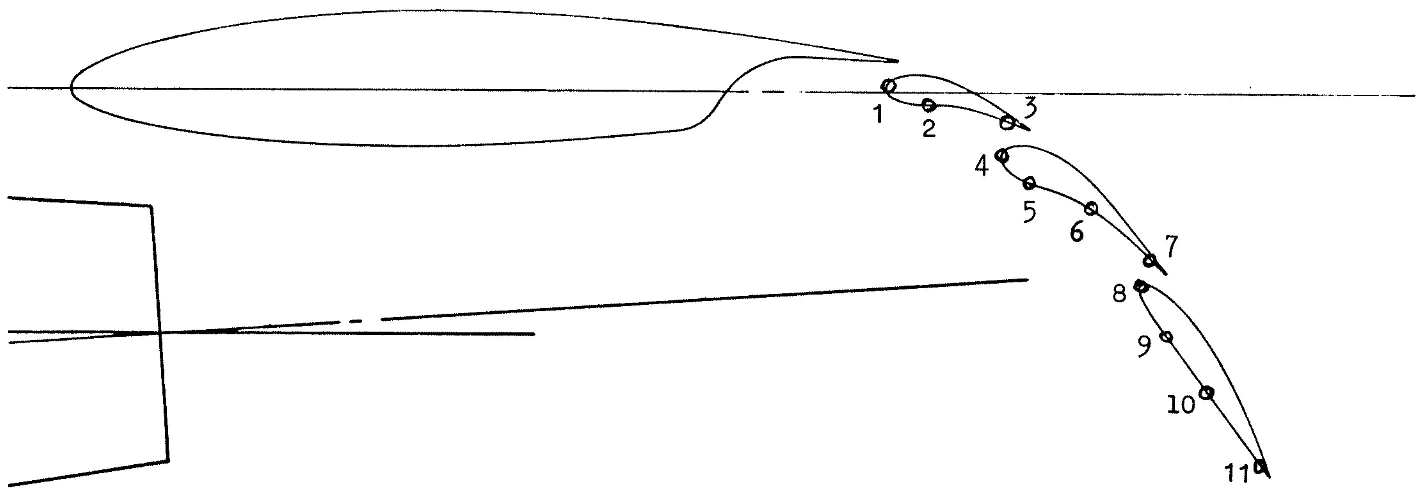


OAPPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 170 m/s	148.9	151.3	-	161.6	150.3	-	-	-	-	-	-
V_j = 245 m/s	155.2	158.1	-	168.4	156.2	-	-	-	-	-	-

(a) Baseline A, takeoff.

Figure 7-13.- Overall *surface* pressure fluctuations.

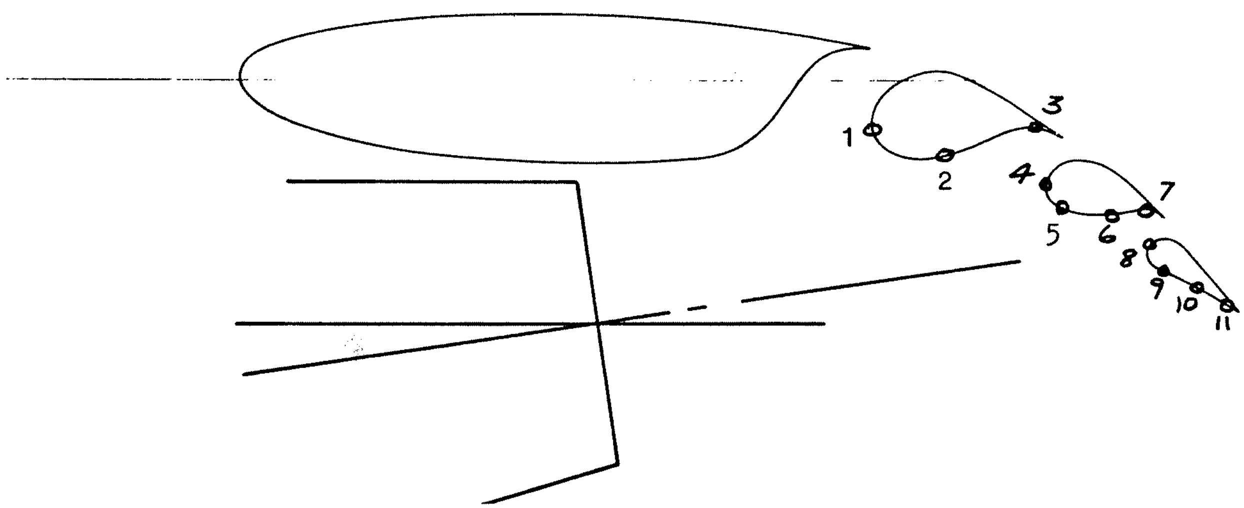


OAFPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 170 m/s	149.5	154.4	156.4	157.4	148.2	-	-	-	-	-	-
V_j = 245 m/s	156.8	162.2	165.8	165.9	156.5	-	-	-	-	-	-

(b) Baseline A, landing.

Figure 7-13.- Continued.

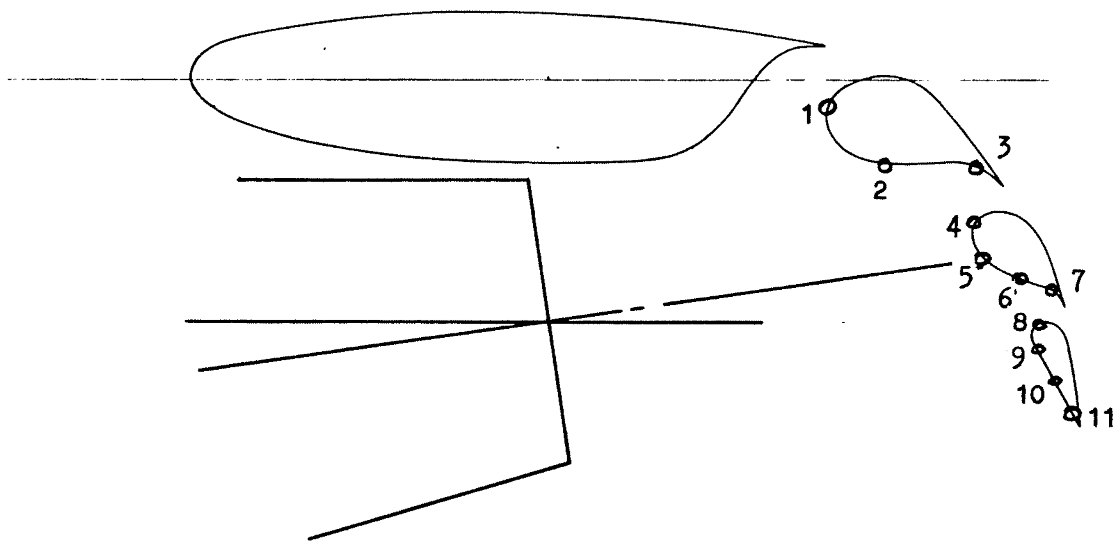


OAFPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 120 m/s	149.7	142.8	149.4	-	146.1	-	142.4	134.4	141.9	139.5	138.0
V_j = 195 m/s	157.7	152.7	158.6	-	155.0	-	151.1	142.7	149.7	147.6	146.3

(c) Baseline B, takeoff.

Figure 7-13.— Continued.

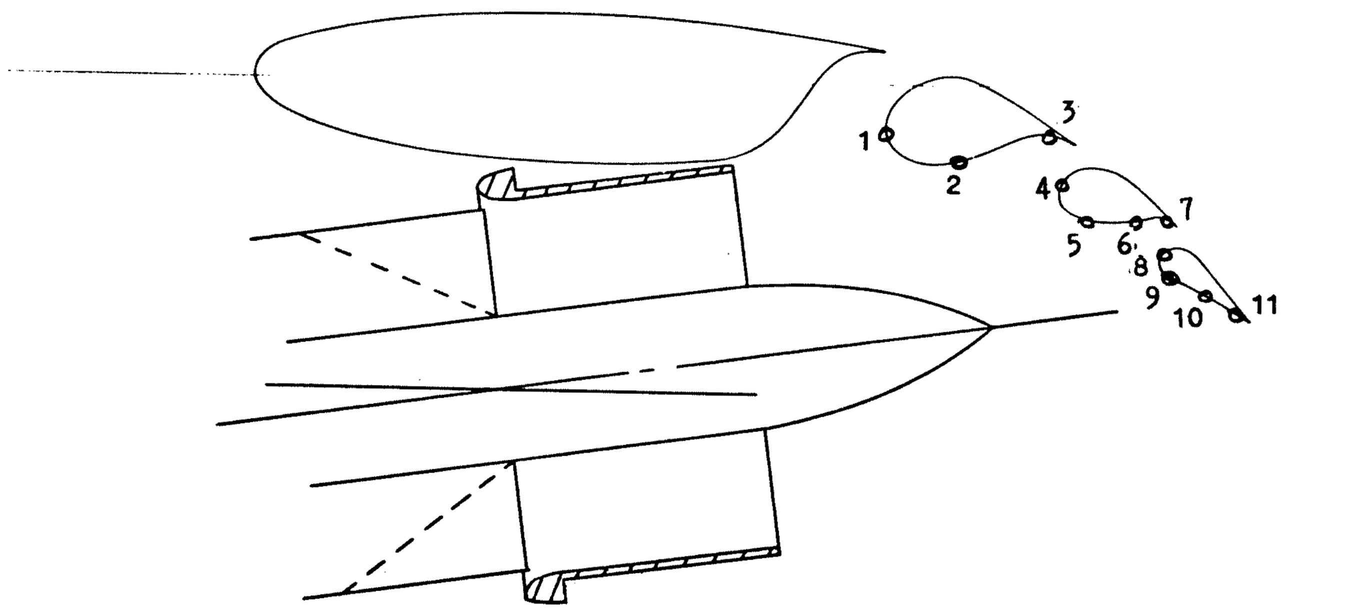


OAFPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 120 m/s	151.3	142.3	147.2	-	146.2	-	139.2	135.4	144.6	143.3	140.3
V_j = 195 m/s	160.9	151.4	147.4	-	154.5	-	149.6	146.2	153.3	151.4	146.0

(d) Baseline B, landing.

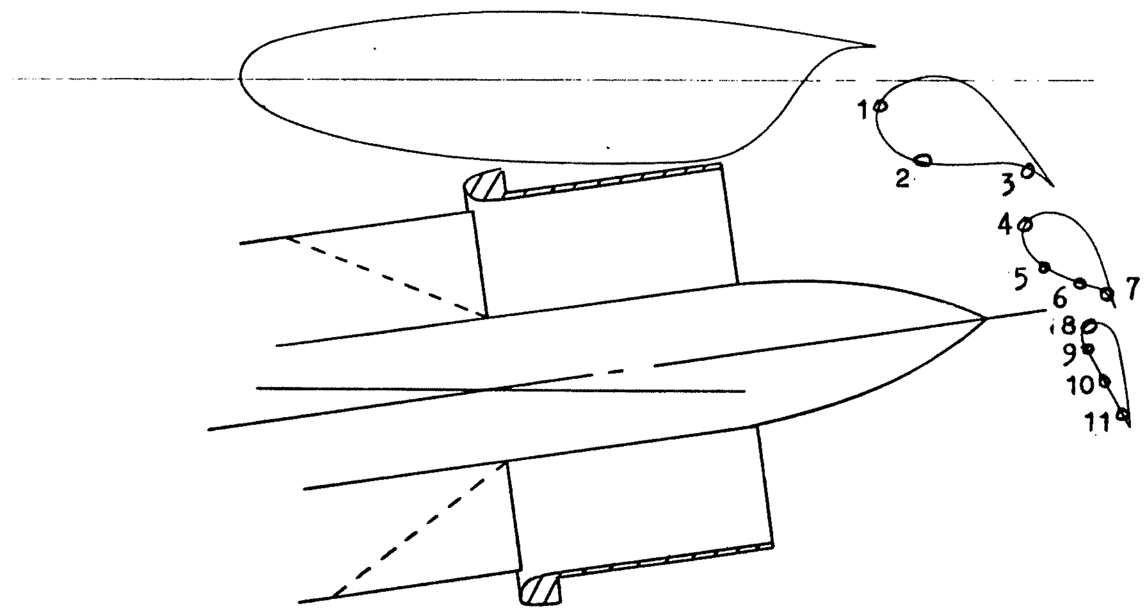
Figure 7-13.- Continued.



	OAFPL, dB										
Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 170 m/s	141.1	144.1	151.3	-	143.1	-	138.3	129.3	137.8	135.6	134.7
V_j = 245 m/s	157.2	151.1	158.9	-	153.9	-	159.7	140.0	150.6	144.3	144.8

(e) Baseline B with mixer nozzle and treated ejector, takeoff.

Figure 7-13.- Continued.

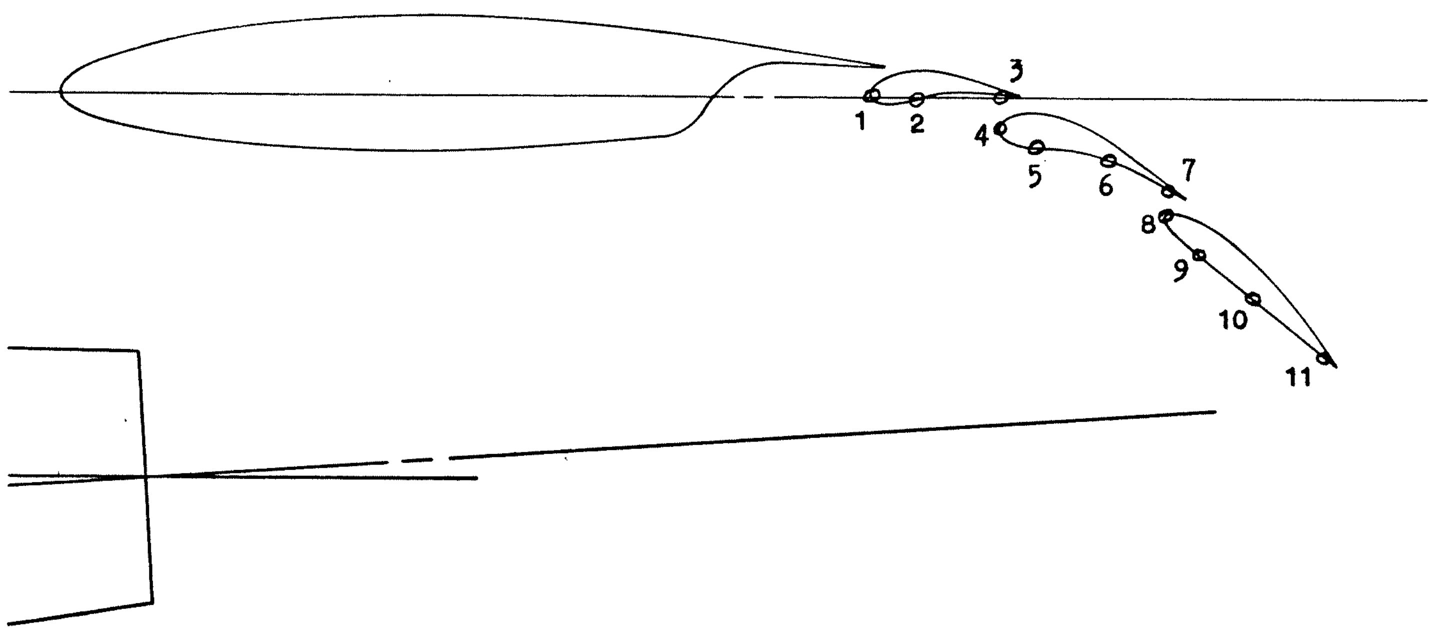


OAFPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 170 m/s	153.1	141.8	145.0	-	142.0	-	136.0	135.1	139.5	139.3	138.7
V_j = 245 m/s	158.4	149.5	152.8	-	149.9	-	143.9	143.7	149.5	142.7	148.3

(f) Baseline B with mixer nozzle and treated ejector, landing.

Figure 7-13.— Continued.

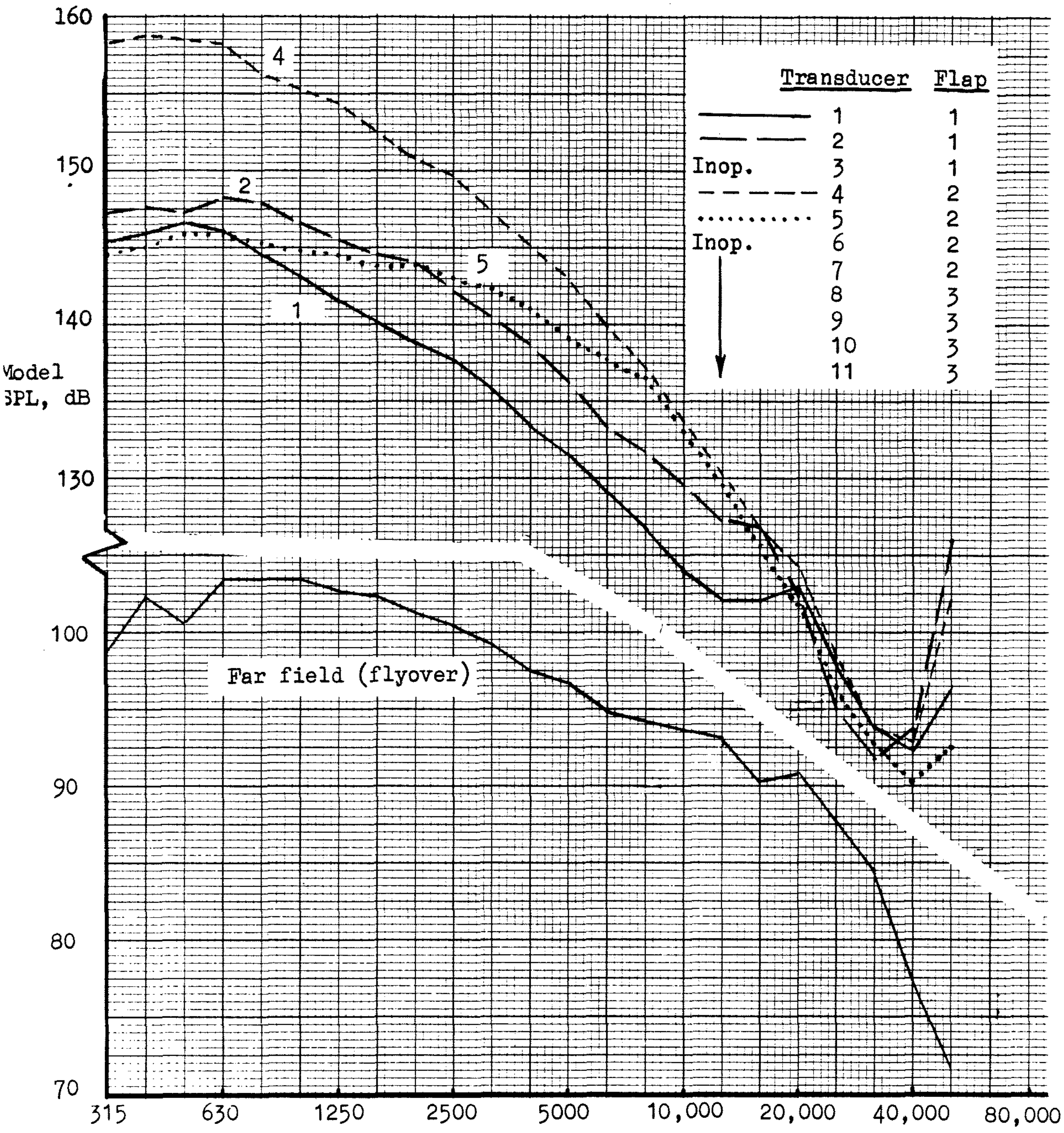


OAFPL, dB

Flap	1			2				3			
Transducer	1	2	3	4	5	6	7	8	9	10	11
V_j = 170 m/s	144.2	145.8	-	154.5	154.2	-	-	-	-	-	-
V_j = 245 m/s	151.2	152.9	-	150.2	151.7	-	-	-	-	-	-

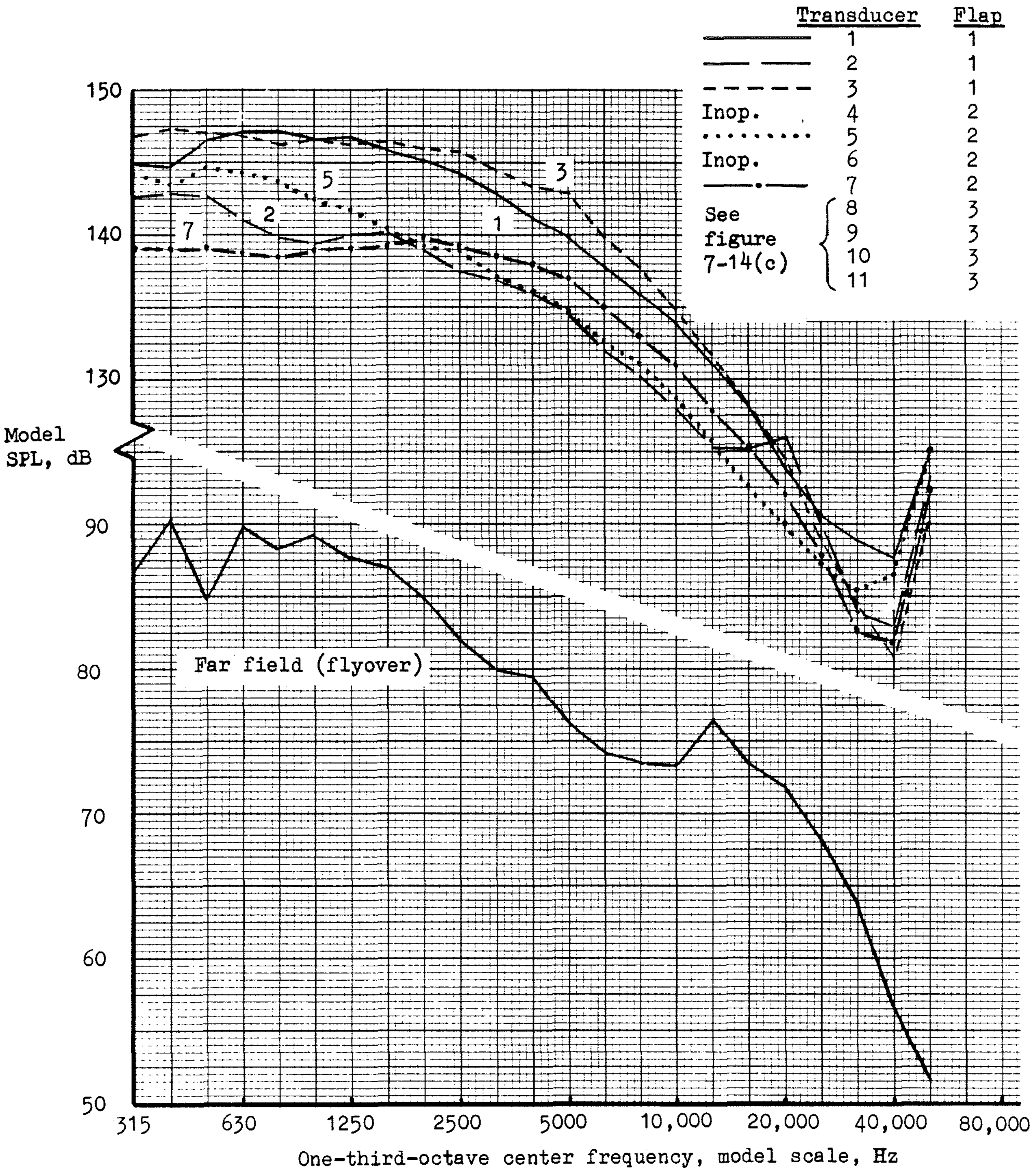
(g) Baseline A with nozzle dropped 10.2 cm, takeoff.

Figure 7-13.— Concluded.



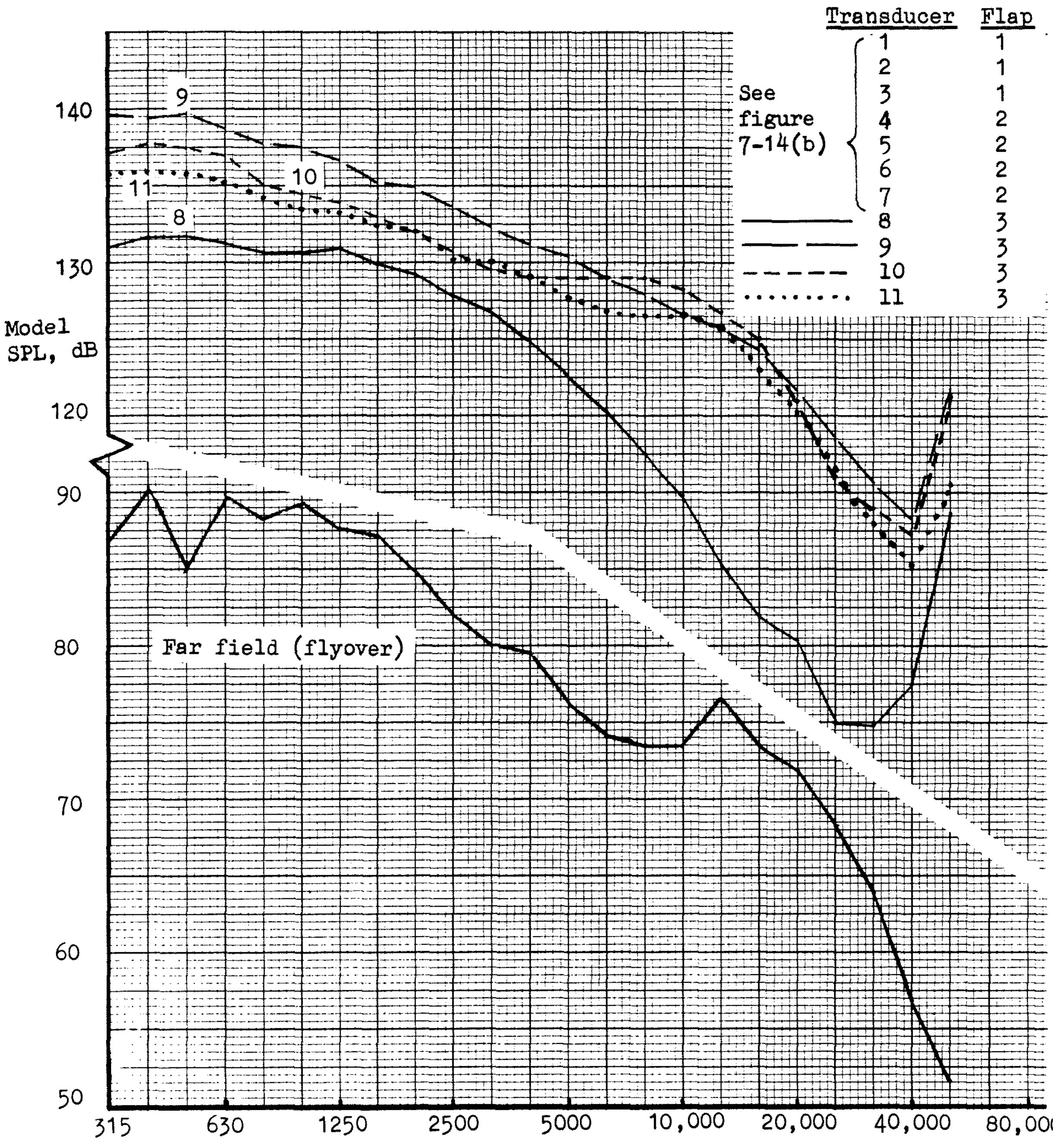
(a) Baseline A, takeoff. V_j = 245 m/s.

Figure 7-14.- Surface and far-field spectra.



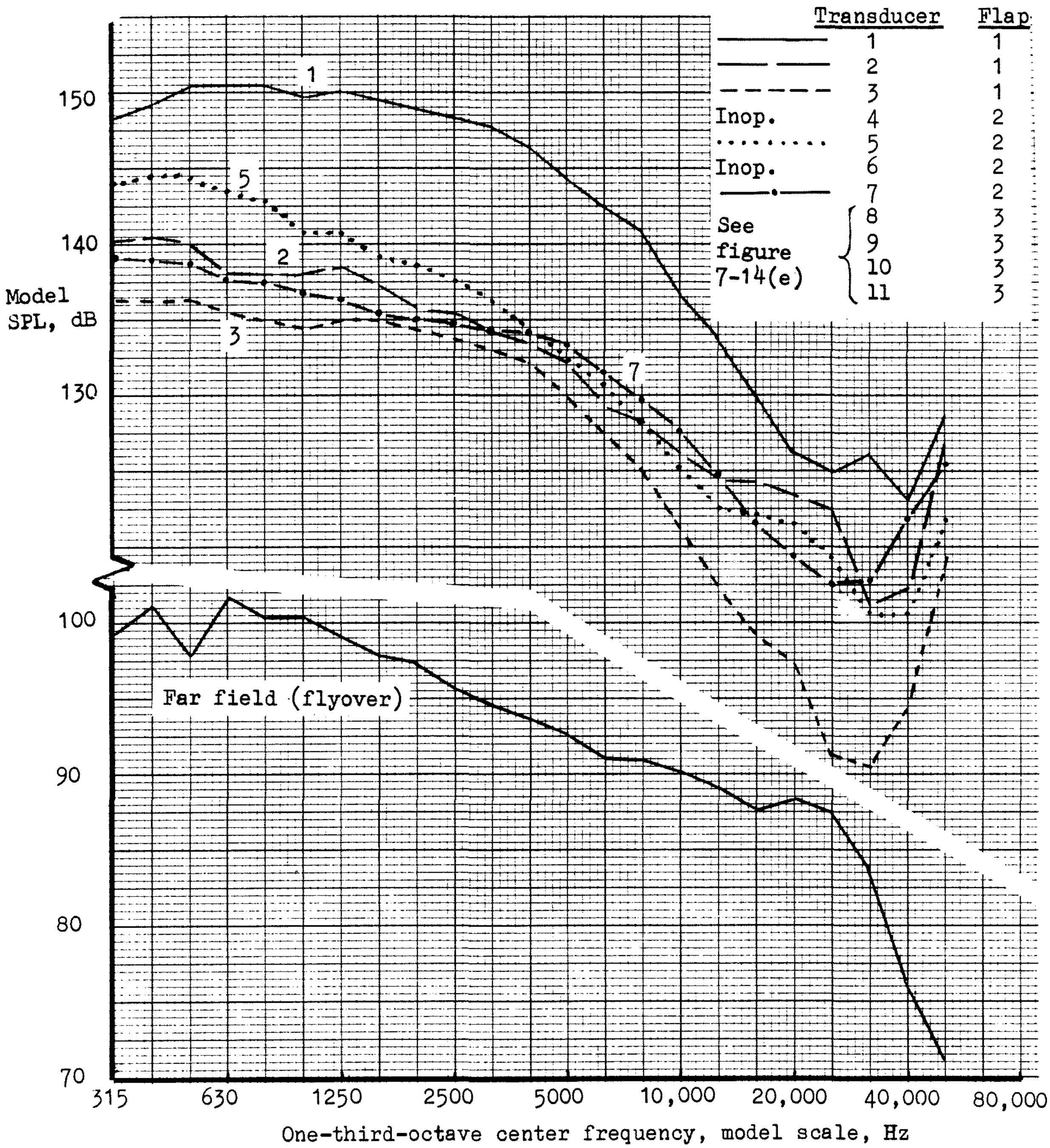
(b) Baseline B, takeoff. First and second flaps. V_j = 195 m/s.

Figure 7-14.- Continued.



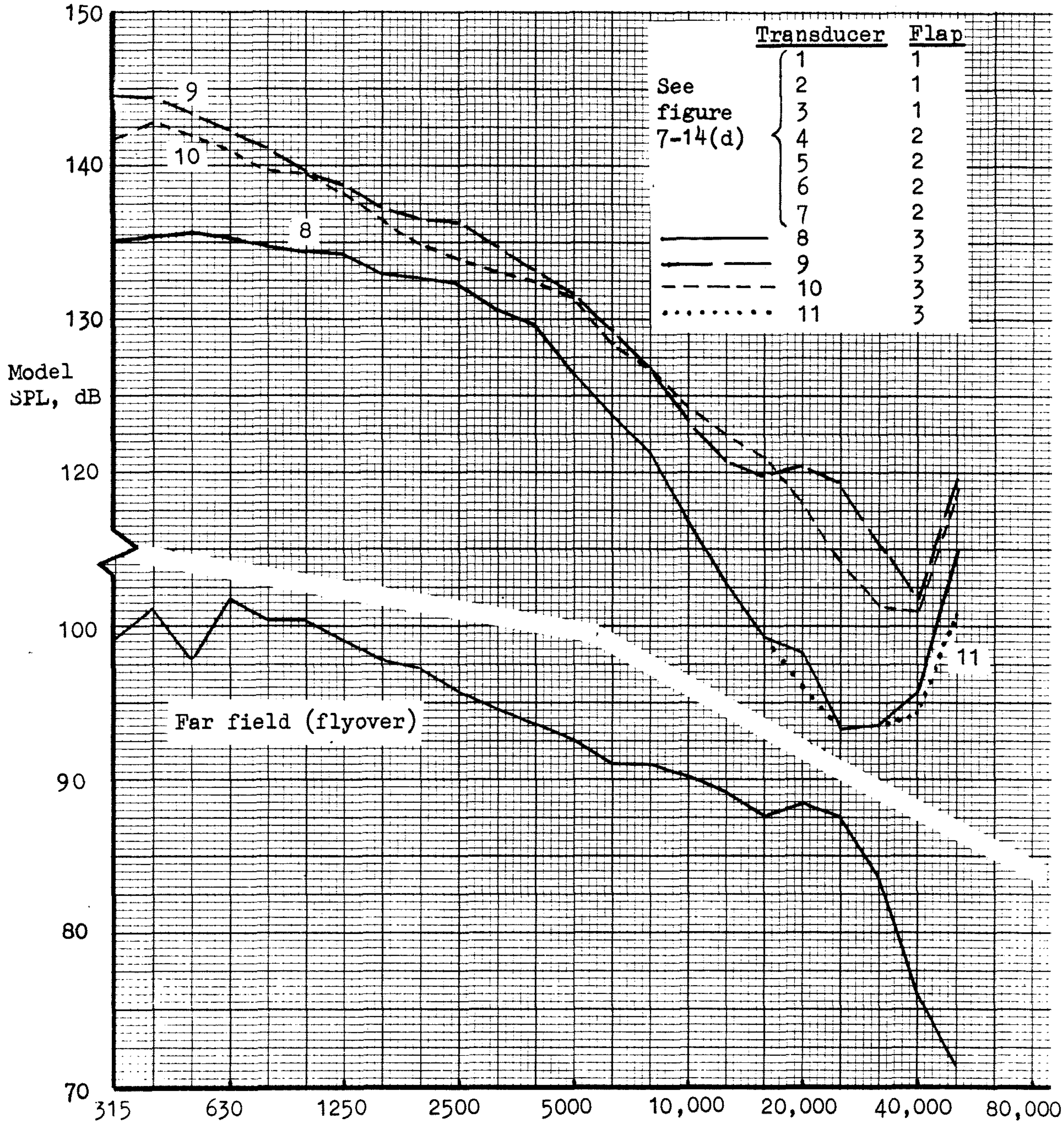
(c) Baseline B, takeoff. Third flap. V_j = 195 m/s.

Figure 7-14.- Continued.



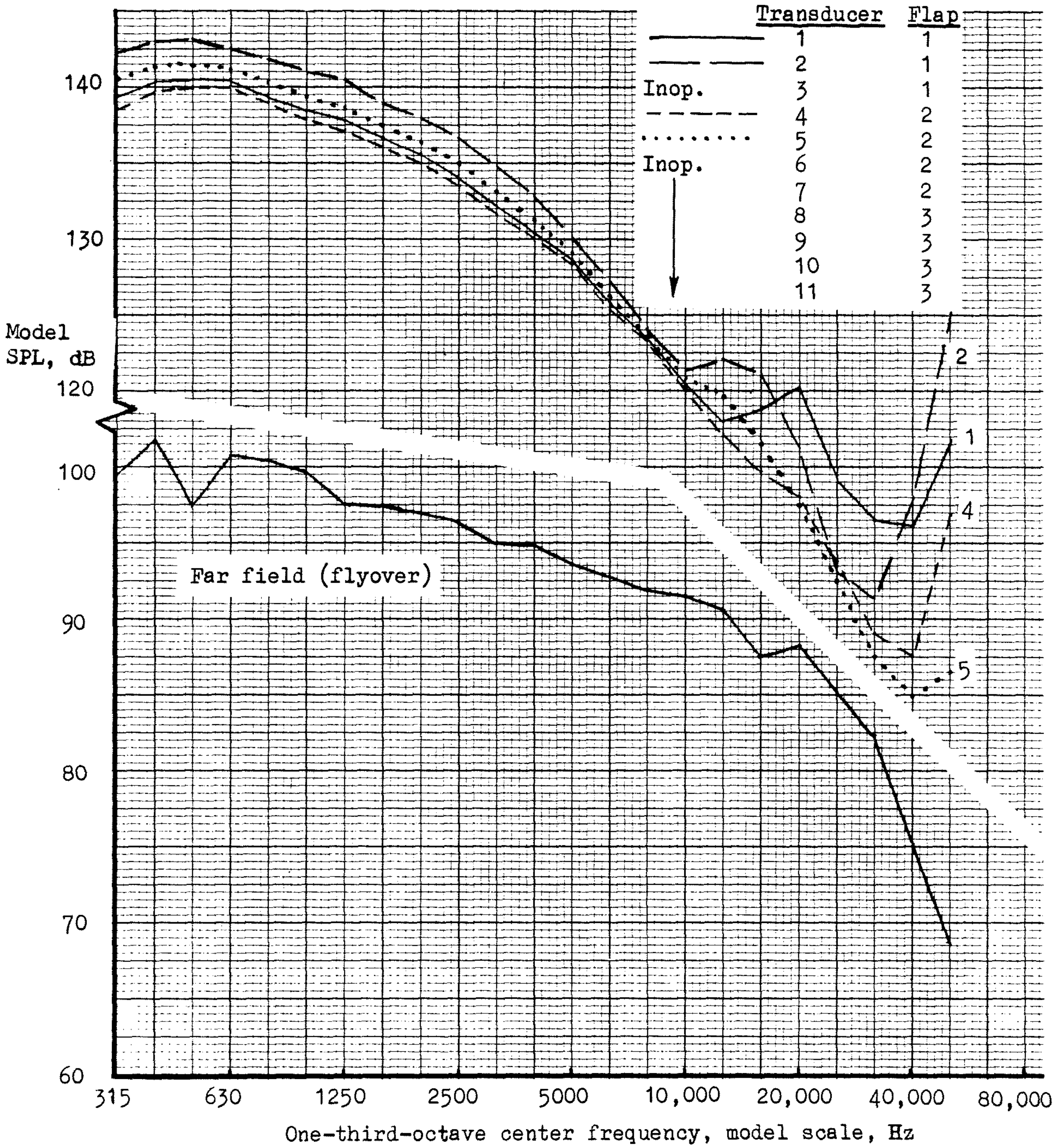
(d) Baseline B, landing. First and second flaps. V_j = 195 m/s.

Figure 7-14.- Continued.



(e) Baseline B, landing. Third flap. V_j = 195 m/s.

Figure 7-14.- Continued.



(f) Baseline A with nozzle dropped 10.2 cm, takeoff. V_j = 245 m/s.

Figure 7-14.- Concluded.

Angle Below Wing, Rad		Perforated Trailing Edges				Perforated & Stuffed T.E.'s				Flexible Trailing Edges			
		1.572		0.524		1.572		0.524		1.572		0.524	
V_j, m/s	Series	150	250	150	250	150	250	150	250	150	250	150	250
B/L A Effect on PNLM, PNdB No. of Tests: B/L, Treated Confidence Interval, PNdB	1	+0.1 11, 1 ±0.6	-0.3	-0.3 4, 1 ±0.7	-0.8	+0.3 11, 1 ±0.6	-0.3	-1.0 4, 1 ±0.7	-1.3	+0.1 11, 1 ±0.6	-0.4	+0.6 4, 1 ±0.7	-0.2
B/L A + Fairing	1	-1.3 2,1 ±0.8	-1.5	-0.4 2,1 ±0.8	-0.5					-2.1 2,1 ±0.8	-1.3	-1.3 2,1 ±0.8	-0.8
B/L B	2	+0.2 7, 4 ±0.4	+0.5	+0.1 2, 1 ±0.8	+0.6	+0.1 7, 4 ±0.4	+0.6			+0.5 7, 2 ±0.5	+0.5	+0.5 2, 1 ± 0.8	+0.2
B/L B + Fairing	2	+0.3 4,2 ±0.6	+0.2			0.0 4, 2 ±0.6	+0.2			0.0 4, 2 ± 0.6	+0.4		
B/L A	2					0.0 11, 3 ± 0.4	-0.2	0.0 4, 2 ± 0.6	+0.1				
B/L A + Fairing	2					-0.9 2, 1 ±0.8	+1.0	-0.5 2, 1 ± 0.8	+0.5				
B/L A + Reduced Flap Gap (RFG)	2					-0.2 3, 2 ± 0.6	-0.1	-0.9 2, 1 ±0.8	-0.3				
B/L B + Mixer Nozzle With Treated Ejector (MNTE) + Fairing	2	+0.3 1,1 ± 1.0	-0.3							-0.1 1, 1 ± 1.0	-0.1		

TABLE 7-I. - EFFECT OF THIRD-FLAP TREATMENT ON PNLM. TAKEOFF.

TABLE 7-II.- EFFECT OF FAIRING OVER FLAP SLOTS. TAKEOFF.

Angle below wing, rad	1.572		0.524	
V_j, m/s	150	250	150	250
Baseline A				
Effect on PNLM, PNdB	-3.5	-1.2	-1.0	+0.2
No. of tests: faired, unfaired	11,2		4,2	
Confidence interval, PNdB	±0.5		±0.6	
Baseline B	-4.3	0.0	-2.9	-0.9
	7,4		2,1	
	±0.4		±0.8	
B/L B + SFG + 0.262 rad sweep	-5.3	-1.1	-3.8	-1.9
+ 17.67-cm nozzle	2,1		1,1	
	±0.8		±1.0	
Baseline B + mixer nozzle with	-2.5	-0.5		
treated ejector	3,1			
	±0.8			
Average	-3.9	-0.7	-2.6	-0.9

TABLE 7-III.- EFFECTS OF INTERNAL BLOWING. BASELINE A, TAKEOFF, FLYOVER.

(a) Triple-slotted flaps.

Zero-bleed PNLM

Bleed percentages are shown in parentheses

	Slot velocity, m/s: 0	85	120	140	165	190	220	260
0.064-cm T.E. slot V_j = 150 m/s V_j = 250 m/s V_j exponent	98.5 114.2 7.1	ΔPNLM from zero bleed				+0.8(3.4%) -0.2(2.0%) 6.6	+6.7(3.9%) -0.7(2.3%) 3.7	
0.127-cm T.E. slot	98.5 114.2 7.1			+1.6(4.9%) -0.1(3.0%) 6.3		+5.5(6.7%) -0.6(4.0%) 4.4	+7.0(7.7%) -0.4(4.6%) 3.8	
0.254-cm T.E. slot	98.5 114.2 7.1	+1.2(6.0%) -0.5(3.6%) 6.4			+9.5(11.6%) +0.2(7.0%) 2.9			
0.152-cm U/S slot	98.5 114.2 7.1		-0.2(5.0%) +0.3(3.0%) 7.3				+2.2(9.3%) -0.3(5.6%) 6.0	
0.152-cm L/S slot	98.5 114.2 7.1		+0.8(5.0%) -0.5(3.0%) 6.6		+1.2(6.9%) -0.6(4.2%) 6.3		+5.1(9.3%) +0.6(5.6%) 5.0	

(b) Flaps faired over.

	0	85	120	140	165	190	220	260
0.064-cm T.E. slot	93.6 112.0 8.4			+0.2(2.5%) 0.0(1.5%) 8.2		+0.1(3.4%) -0.2(2.0%) 8.2	+1.3(3.9%) -0.5(2.3%) 7.5	+11.1(4.6%) +0.6(2.8%) 3.6
0.264-cm T.E. slot	93.6 112.0 8.4	-0.3(6.0%) +0.6(3.6%) 8.7			+11.6(11.6%) +1.5(7.0%) 3.8			
0.152-cm U/S slot	93.6 112.0 8.4		+0.9(5.0%) +1.6(3.0%) 8.6				+4.6(9.3%) +1.5(5.6%) 6.9	
0.152-cm L/S slot	93.6 112.0 8.4		+0.4(5.0%) +0.5(3.0%) 8.3				+8.4(9.3%) +0.9(5.6%) 4.9	

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8. STATIC TEST AERO/PROPULSION RESULTS

Aero/Propulsion Performance

The evaluation of a wing/flap/nozzle configuration from the noise standpoint involves its effect on aircraft performance as well as on noise. The trade-off between noise and performance and their integration into a single criterion are discussed in section 11, Application to Aircraft. To provide performance inputs to the evaluation, nozzle and wing/flap forces were measured in the static test program. Nozzle axial force and vertical force (normal to the wing), and wing/flap forces in the wing geometric axes, were measured with load cells; trailing edge blowing force was determined from slot airflow, pressure ratio, and velocity coefficient. These data were reduced to two performance parameters - jet turning efficiency and jet turning angle.

Turning efficiency and turning angle. - Turning efficiency, a significant parameter in the evaluation of configurations, is the ratio of the momentum of the turned stream, in the lift-drag plane, to the nozzle exit momentum. It is a measure of the viscous losses in the flap system and of the diversion of jet momentum toward the tip and root of the wing, out of the lift-drag plane. Turning angle is the angle through which the jet is turned, in the same plane, as determined by the resultant force vector on the wing and flap. Turning angle is a minor factor in configuration evaluation. The derivation of turning efficiency and turning angle is shown in figure 8-1.

Both parameters relate only to primary nozzle momentum. Trailing edge slot momentum, if any, was taken out in the calculation of turning efficiency and turning angle and was put back in as a separate factor in the evaluation of configurations.

Application of turning efficiency. - The static tests measured the effect of configuration on turning efficiency and turning angle at zero speed. To allow configurations to be compared at the critical noise condition, after takeoff, the static results were combined with the wind tunnel lift and accelerating-force (thrust minus drag) data, which define

the characteristics of the complete three-dimensional wing throughout the operating regime of interest. The principle was as follows:

- Lift and accelerating forces with and without a perforated third flap were measured in the wind tunnel over the appropriate operating range.

- Jet turning efficiency and turning angle, with and without a perforated third flap, were measured in the wind tunnel at zero forward speed.

- The proportionality of lift and accelerating force increments to turning efficiency increments obtained in the wind tunnel tests with the hardwall and perforated third flaps was assumed to apply to all treatments. That is,

$$\Delta(L,\ F_X)_{\text{treatment}} = (\Delta(L,\ F_X)_{\text{perf. third flap, W/T}}) \times (\Delta(\eta_T)_{\text{treatment, static rig}}) / (\Delta(\eta_T)_{\text{perf. third flap, W/T}})$$

Estimating lift and drag effects in this manner involves little error for most of the treatments tested, which have minor effects on the flow field, similar to the effect of a perforated third flap. The same procedure had to be used in comparing the two baselines and their variants, however, as wind tunnel data on baseline A were unavailable. Since the baseline configurations have markedly different flow fields, the comparisons in these cases are only general guides.

Performance results. - Figures 8-2 through 8-5 show typical plots of jet turning efficiency and angle. The data are summarized in table 6-III, which lists the efficiencies and angles read from the curves at 150 and 250 m/s jet velocity. It can be seen that jet velocity has little effect in most cases.

The turning efficiencies of the baseline configurations and their

major variants are compared at takeoff and 250 m/s V_j in figure 8-6. The plot shows that the data are consistent and repeatable. For example, tests of baseline B with 0.262 rad (15°) trailing edge sweep show a total spread of 0.5% efficiency in three separate static test series. Efficiency is consistently slightly lower in the wind tunnel than on the static rig, due presumably to minor differences between the models.

Figure 8-6 also shows that baseline B is more efficient than baseline A by 2.0% without a fairing and 4.5% with a fairing, and that the installation of a perforated and stuffed third flap reduces the turning efficiency of baseline A by 2.0%.

Baseline A in series 1. - Figure 8-6 shows only the series 2 results for baseline A. The turning efficiency of baseline A was approximately 5% lower in series 1 than in series 2, as is shown in figure 8-7. As is indicated below, there is every reason to believe that the difference is real and that it is due to the sensitivity of baseline A to small changes in the location of the wing and flaps relative to the nozzle.

1. Consistency of force data. All of the force data are remarkably consistent. Baseline B tracks across three static test series and the wind tunnel tests; the differences between static rig and wind tunnel data are consistent; fairing and treatment effects are as would be expected; baseline A results are repeatable in series 1 and again in series 2; even the difference between the two series is consistent in regard to fairing and treatment effects. The force data appear in every way to be reflecting real conditions.

2. Agreement with rake data. The total pressure surveys provide independent verification of the force data. Figure 8-8 compares the centerplane trailing edge velocity profiles measured in the two series. The series 2 profile is fuller than the series 1 profile on the lower surface and about the same on the upper surface. If two-dimensional flow is assumed (same profile at all spanwise

locations), integration of the profiles shows 13% more momentum and turning efficiency in series 2 than in series 1. If axial symmetry (of the upper-surface and lower-surface flows, separately) is assumed, the corresponding difference is 21%. Although these calculated differences are larger than the measured force difference of 5%, they substantiate the existence of a significant change in aerodynamic performance.

3. Sensitivity to nozzle position. There is no hard evidence that baseline A is more sensitive to small differences in the position of the nozzle relative to the wing and flaps than baseline B but the cross-sections (figs. 4-11 and 4-13) indicate that such may well be the case, especially in regard to attachment of the spreading jet to the under surface of the wing. The jet grazes a significant extent of the wing chord in baseline A, as may be seen in the oil flow patterns of figure 8-9. A small difference in nozzle height or angle may have a large effect on attachment and on Coanda turning into the flap cove, and thus on jet spreading and viscous losses. In baseline B, grazing is negligible, as is shown in figure 8-10. The greater variability of baseline A is believed to be due to these factors.

There is a possibility of mispositioning the wing/flap model relative to the nozzle, since the two were independently mounted. The nozzle was installed on the air supply line, while the wing/flap was adjusted by cranks from its own support based on plumb lines to a layout on the concrete pad. The adjustment of baseline A was checked in series 2 as soon as its performance shift was known. Only the initial positioning measurements were made, however, in series 1.

Although the effective mechanisms cannot be identified, it is surmised that the flow changes causing the performance shift of baseline A are also responsible for the change in the effect of treatment on baseline A noise between series 1 and series 2. As is discussed in section 7, Static Test Acoustic Results, treating the third flap

trailing edge reduced baseline A noise by 1-2 dB in series 1 but yielded no noise reduction in series 2. It is hypothesized that the treatment-effect differences are related to the performance shift.

Flow Patterns

As an aid to better understanding the acoustic and performance characteristics of the configurations tested, several techniques were used to define the flow field for both the free jet and the jet in the presence of the wing and flap. A 73-probe total pressure rake was used to obtain velocity profiles in the exhaust wake at the approximate locations indicated in the sketches on the velocity profile plots. The rake was canted and rotated in azimuth to point the probes into the local flow. Flap surface flow patterns were also obtained, using oil smeared on the flaps, and tufts were used to determine flow direction and vorticity in the exhaust wake.

Free jets. - Figures 8-11 and 8-12 show the non-dimensionalized velocity profiles of the free jets for the 20.19-cm (7.95-in) conical nozzle and the mixer nozzle with treated ejector. In figure 8-11 with the 73-probe rake positioned across the mixer lobes and just behind the ejector, position 1B, the discrete wakes for each lobe are evident. The peaks have disappeared $1\frac{1}{2}$ ejector diameters downstream at position 3B. As is shown by the profiles at positions 2 through 4, near where the flap would be, the ejector decayer nozzle reduces the peak velocity to approximately 0.75 of the jet velocity at the nozzle exit. This is equivalent to reducing nozzle pressure ratio from 1.5 to 1.25. As is shown in figure 8-12, there is no reduction in the peak velocity for a conical nozzle.

Baseline A. - The spreading of the exhaust flow on the flap is shown in figure 8-13 for baseline A at a takeoff flap angle of 0.698 rad (40°) with a wing sweep of 0.281 rad (16.1°) and a 17.65-cm conical nozzle. The free jet characteristic is exhibited at positions 1 and 2, but at positions 3 and 4 at the center of impingement the exhaust

flattens and spreads, exhibiting a wall flow characteristic, still with negligible reduction in peak velocity. At positions 5 and 6 with the rake aligned with the flow, there is a considerable reduction in velocity. The profile shown in figure 8-14, which was taken in the first test for the same configuration, agrees well with profile 4 of figure 8-13.

Figure 8-15, also for baseline at takeoff, provides a general definition of the exhaust flow directions over the wing as determined by taping tufts to the upper and lower surfaces of the flaps. The approximate thickness and shape of the jet, as described by the 10%-velocity lines shown, were measured using a hand-held wand with a tuft on the end to determine where the velocities appeared to be approximately the same. This qualitative information was combined with the rake velocity profiles to determine the approximate 10%-velocity lines. Varying degrees of vortical flow exist around the jet boundary with a large vortex on the inboard side of the jet as shown.

Figure 8-16 depicts the flow field of baseline at the landing flap setting of 0.960 rad (55°). Compared to takeoff, the jet starts to flatten farther forward on the flap and spreads considerably more, as would be expected since the impingement point moves forward due to the increase in flap angle.

The baseline A flap and nozzle configuration appears to be non-optimum for external blowing in that the first slot is shielded from the jet and contributes little to jet turning. Figure 8-9 shows evidence of this. The exhaust flow impinges slightly on the wing lower surface and then enters the second and third slots, with substantial flow separation in the wing cove and first slot. The nozzle could be moved farther aft and pitched up more to energize the first slot and provide better lift.

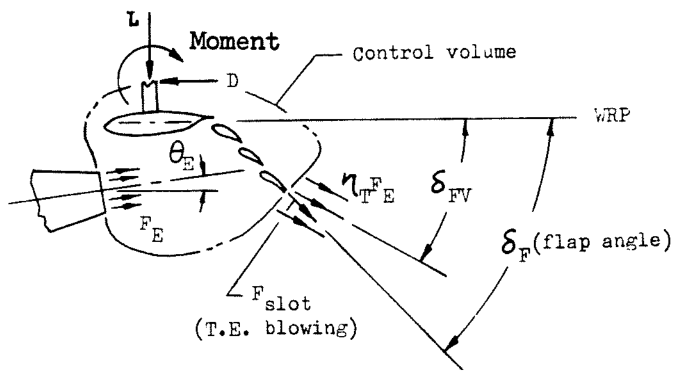
Baseline B. - Figures 8-17 and 8-18 show velocity profiles for baseline B with 17.65-cm conical nozzle and 0.262 rad (15°) wing sweep. Flow spreading is similar to that of baseline A, shown in figures 8-13 and 8-16, except that spreading starts a little farther forward. This

is due to the impingement being farther forward and the nozzle being pitched more into the flap, as is shown by comparing figures 4-13 and 4-14 with figures 4-11 and 4-12.

Figures 8-19 and 8-20 show velocity profiles for baseline B with a 20.19-cm conical nozzle and zero wing sweep. The spreading is essentially the same as with the 17.67-cm nozzle except that the wall jet is thicker because of the larger nozzle. Figure 8-10 shows that, for the nozzle orientation of baseline B, there is little flow separation in the wing cove and significant exhaust flow into the first slot as well as the other two slots.

Figures 8-21, 8-22, and 8-23 show flow patterns for baseline B with the fairing on the lower surface. The most notable difference compared to the triple-slotted flaps is the absence of flow on the upper surface, as is shown by a comparison of profile 4 for the two cases.

Profiles 4 and 5 of figure 8-24, showing exhaust flow in and around the flaps, are similar to profiles 2A and 4A of figure 8-11 for the free jet, indicating that there is little spreading of the jet on the flap with the mixer nozzle and ejector. Profile 7 of figure 8-24 does, however, show spreading similar to that obtained on the other configurations.



Momentum equations for control volume

$$D = F_E \cos\theta_E - \eta_T F_E \cos\delta_{FV} - F_{slot}\cos\delta_F$$

$$L = F_E \sin\theta_E + \eta_T F_E \sin\delta_{FV} + F_{slot}\sin\delta_F$$

Simultaneous solution for 2 unknowns

$$\delta_{FV} = \tan^{-1}\left(\left(L - F_E\sin\theta_E - F_{slot}\sin\delta_F\right)/\left(-D + F_E\cos\theta_E - F_{slot}\cos\delta_f\right)\right)$$

$$\eta_T = (1/F_E)\left(\left(L - F_E\sin\theta_E - F_{slot}\sin\delta_F\right)^2 + \left(-D + F_E\cos\theta_E - F_{slot}\cos\delta_F\right)^2\right)^{\frac{1}{2}}$$

Where

L, D and F_E are measured forces and F_{slot} is computed from measured slot airflow, temperature, and pressure.

Figure 8-1. - Derivation of thrust vector angle and turning efficiency.

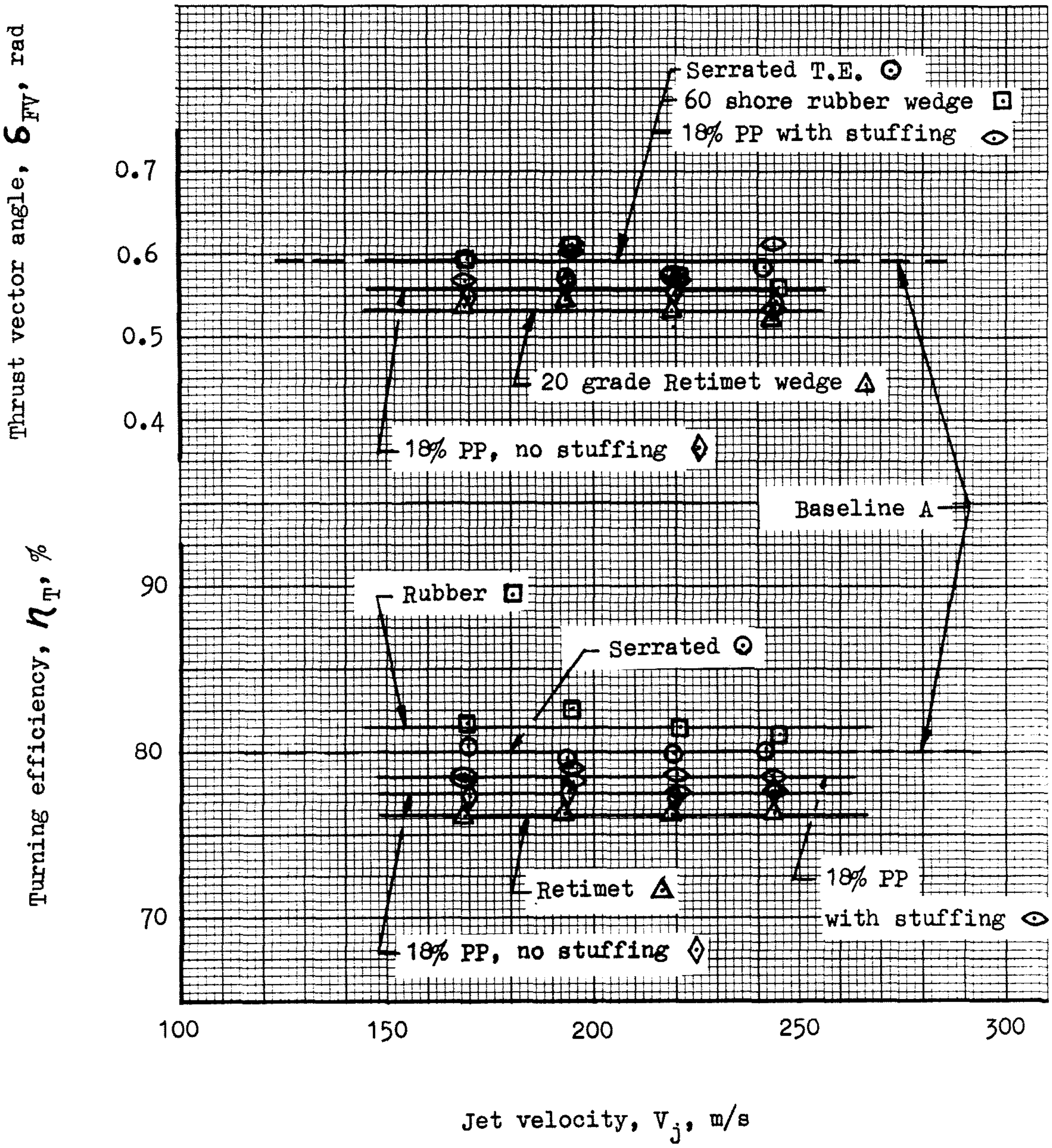


Figure 8-2.- Thrust vector angle and turning efficiency. Effect of third flap T.E. passive treatment, series 1. Baseline A, takeoff.

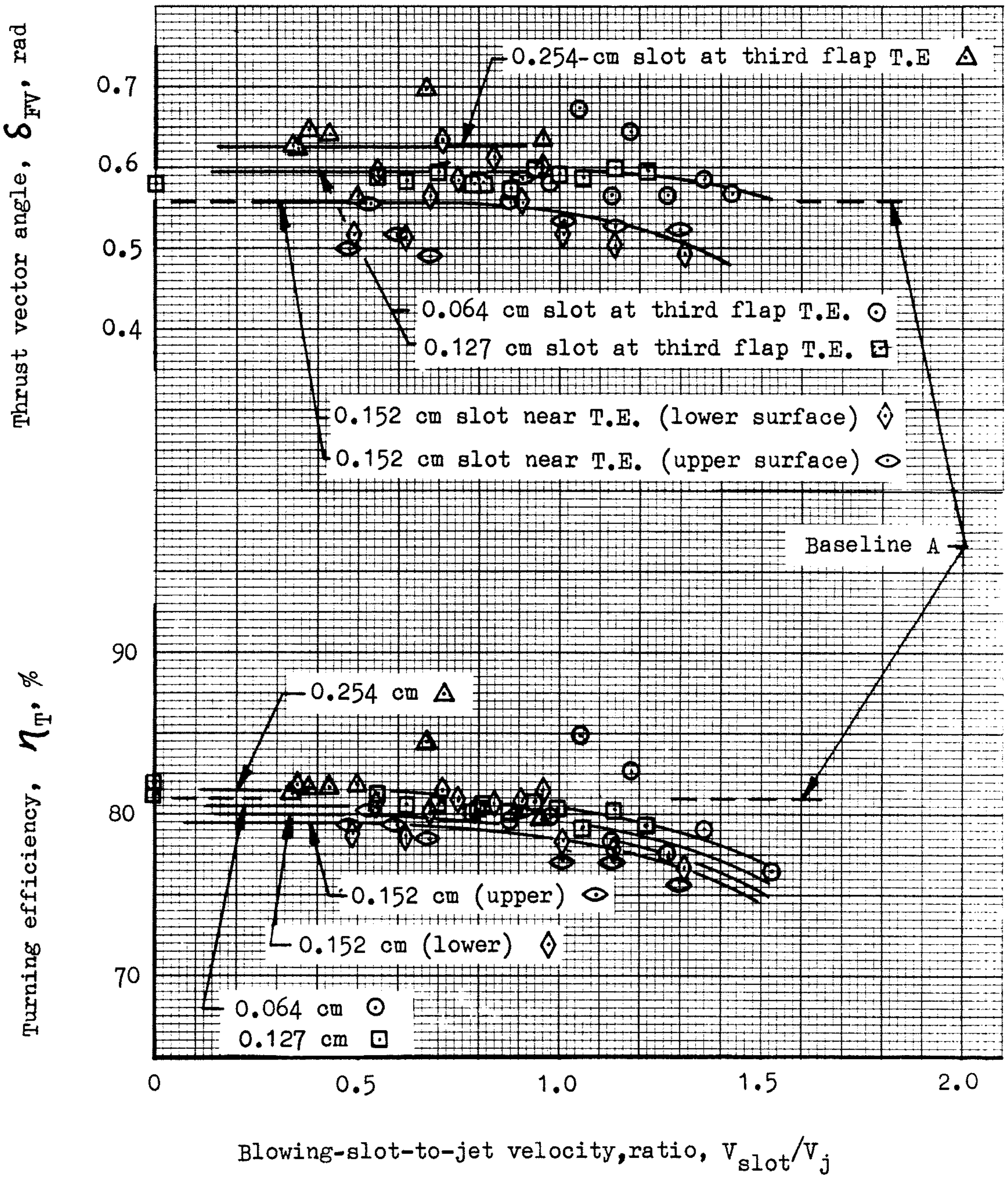


Figure 8-3.- Thrust vector angle and turning efficiency. Effect of T.E. blowing. Baseline A, takeoff.

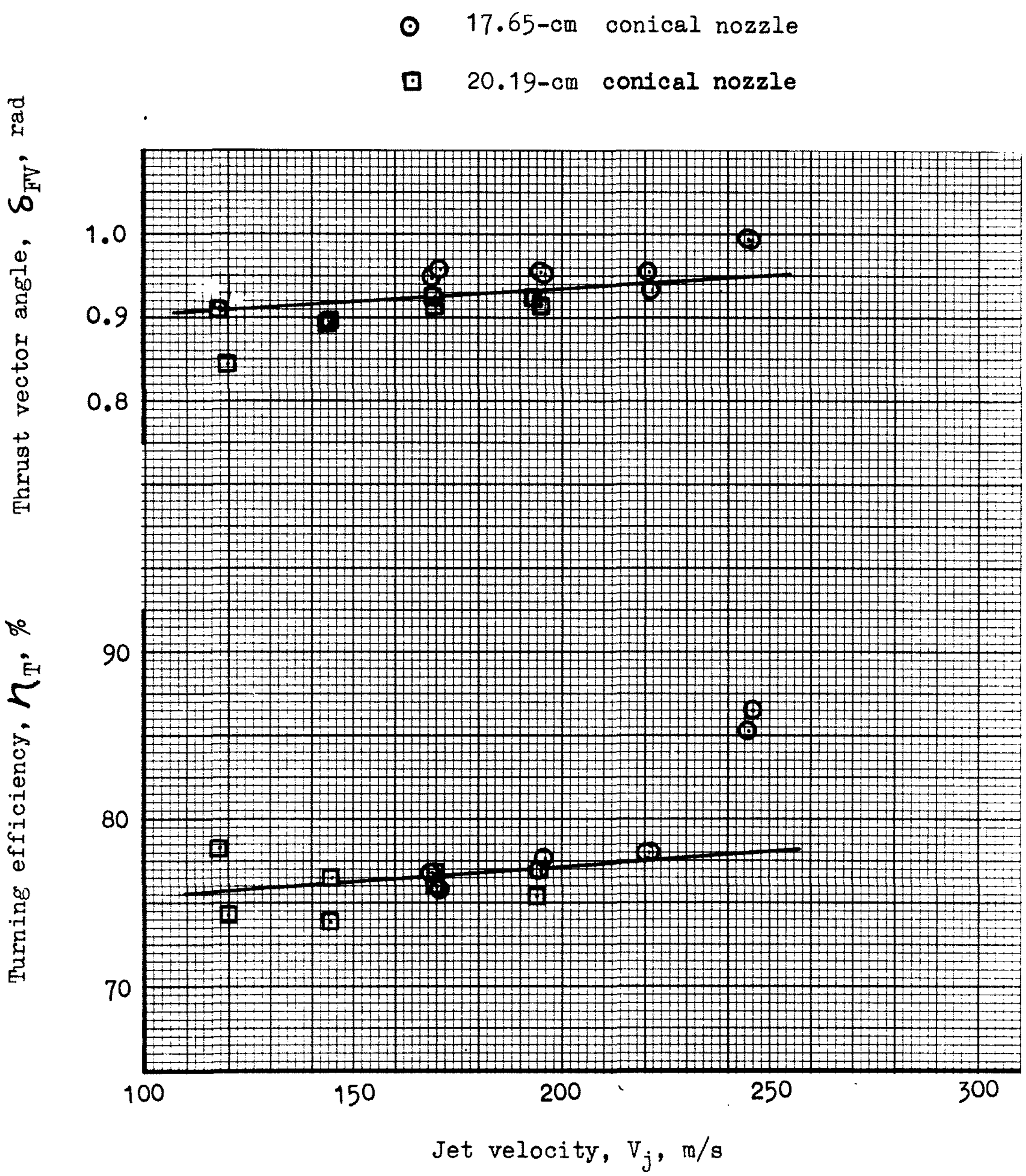


Figure 8-4.- Thrust vector angle and turning efficiency. Effect of nozzle size. Baseline A, landing.

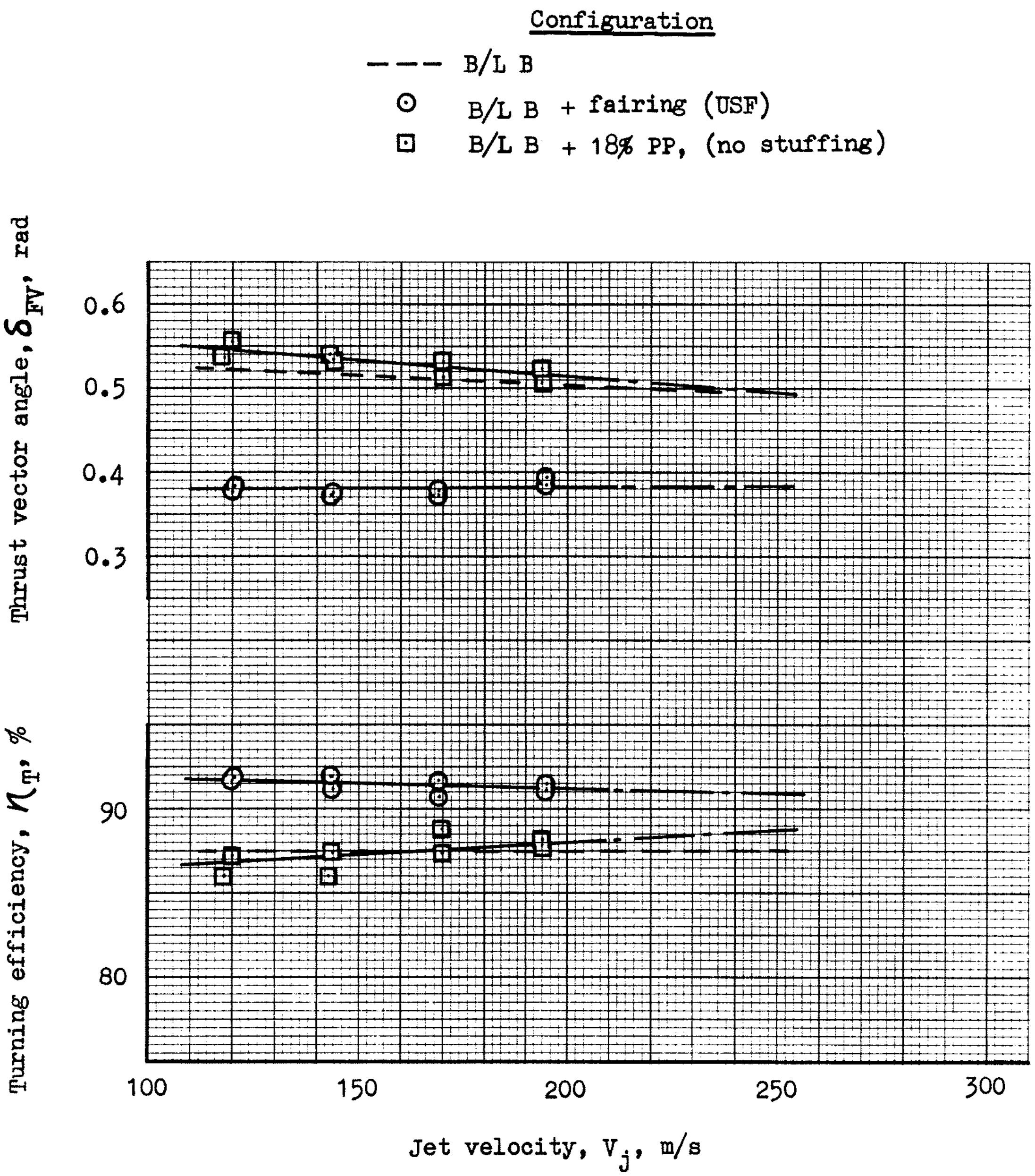


Figure 8-5.- Thrust vector angle and turning efficiency. Effect of fairing and third flap T.E. passive treatment. Baseline B, takeoff.

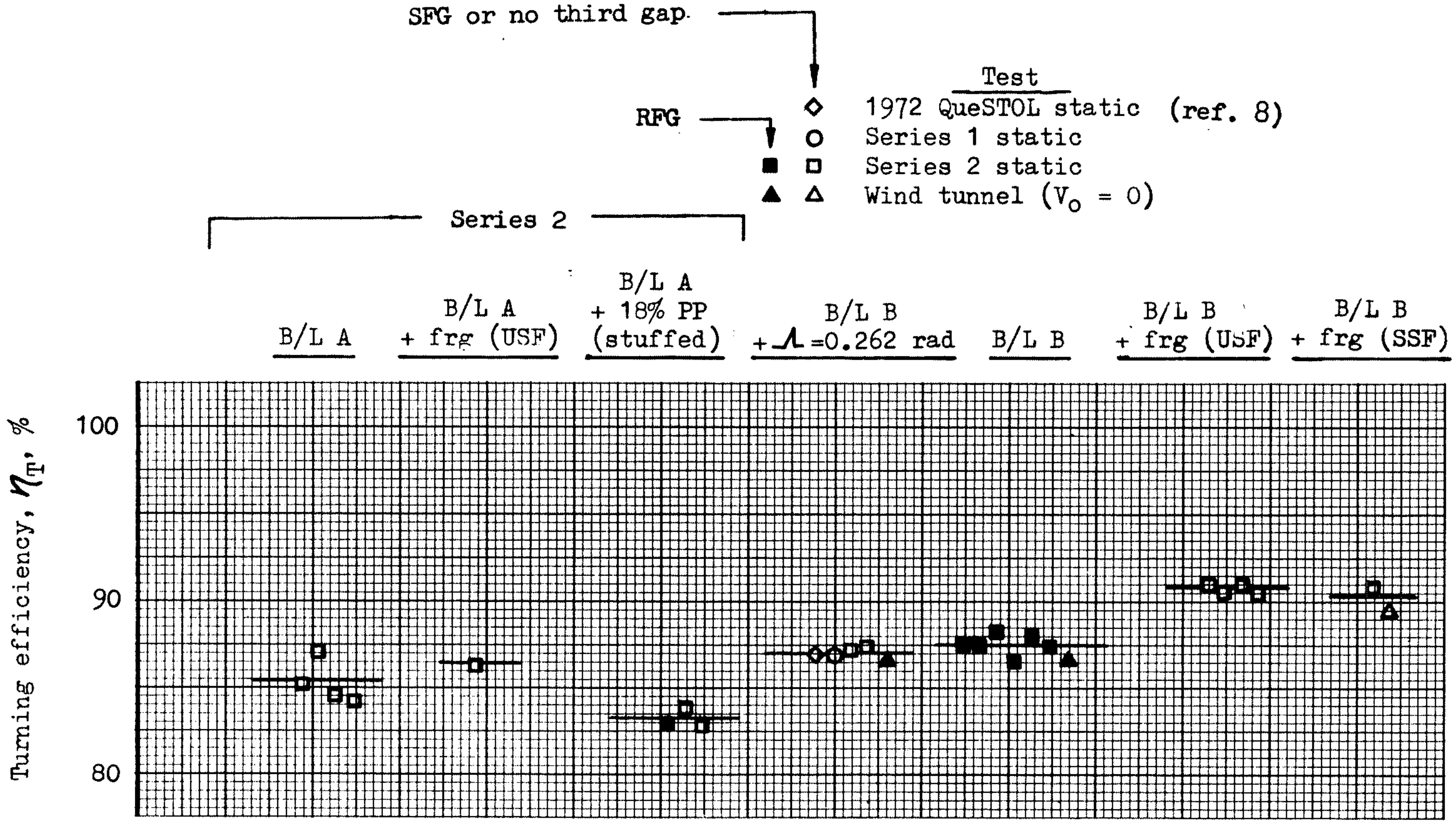


Figure 8-6. - Baseline turning efficiency comparisons and long-term repeatability. Takeoff, V_j = 250 m/s.

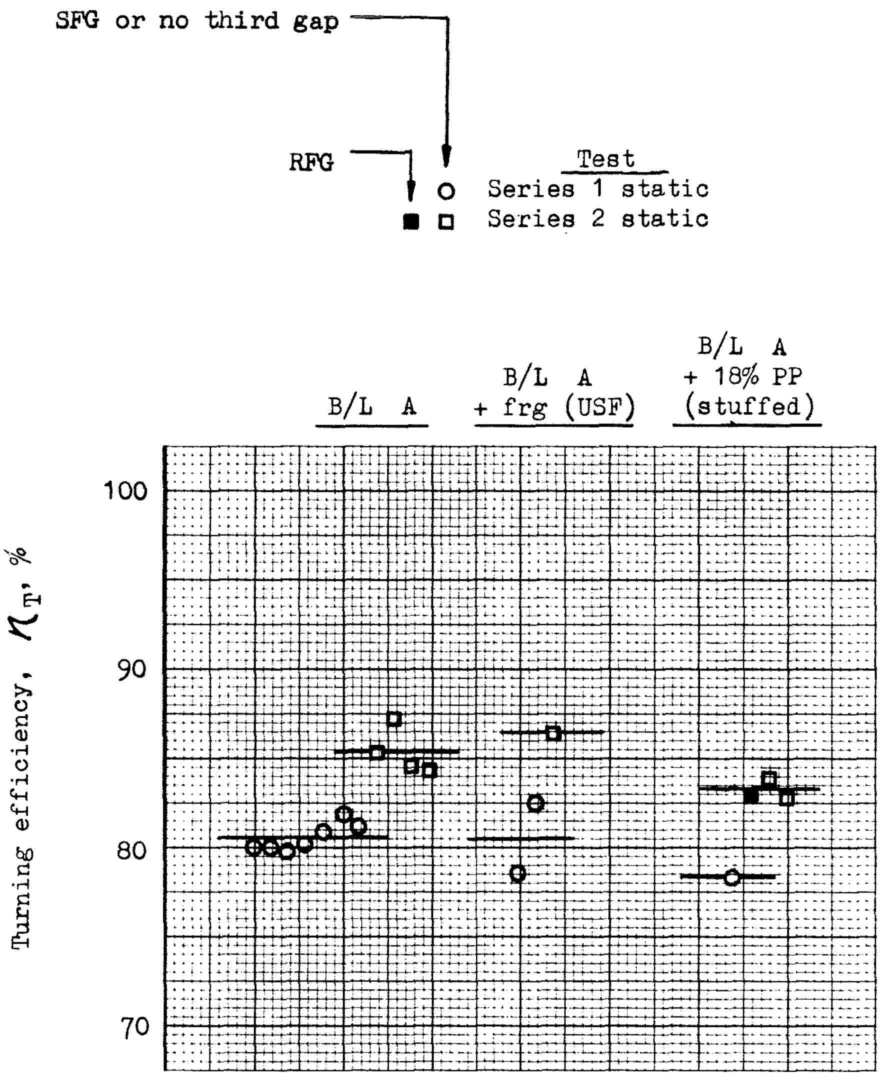


Figure 8-7.- Baseline A turning efficiency.
Comparison of series 1 and series 2
results. Takeoff, V_j = 250 m/s.

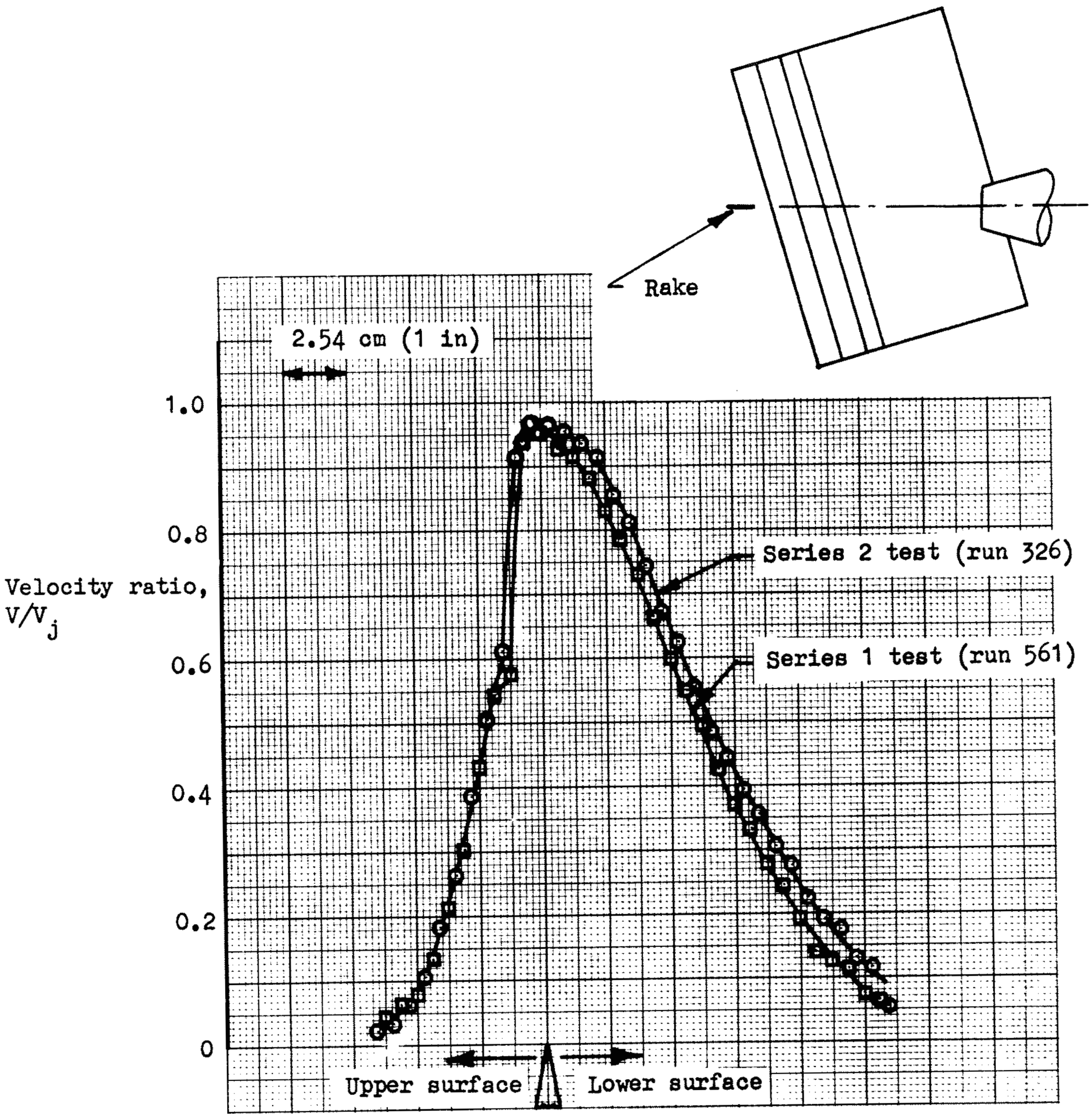


Figure 8-8.- Velocity profiles, baseline A. Comparison of series 1 and series 2 results. Takeoff, V_j = 245 m/s.

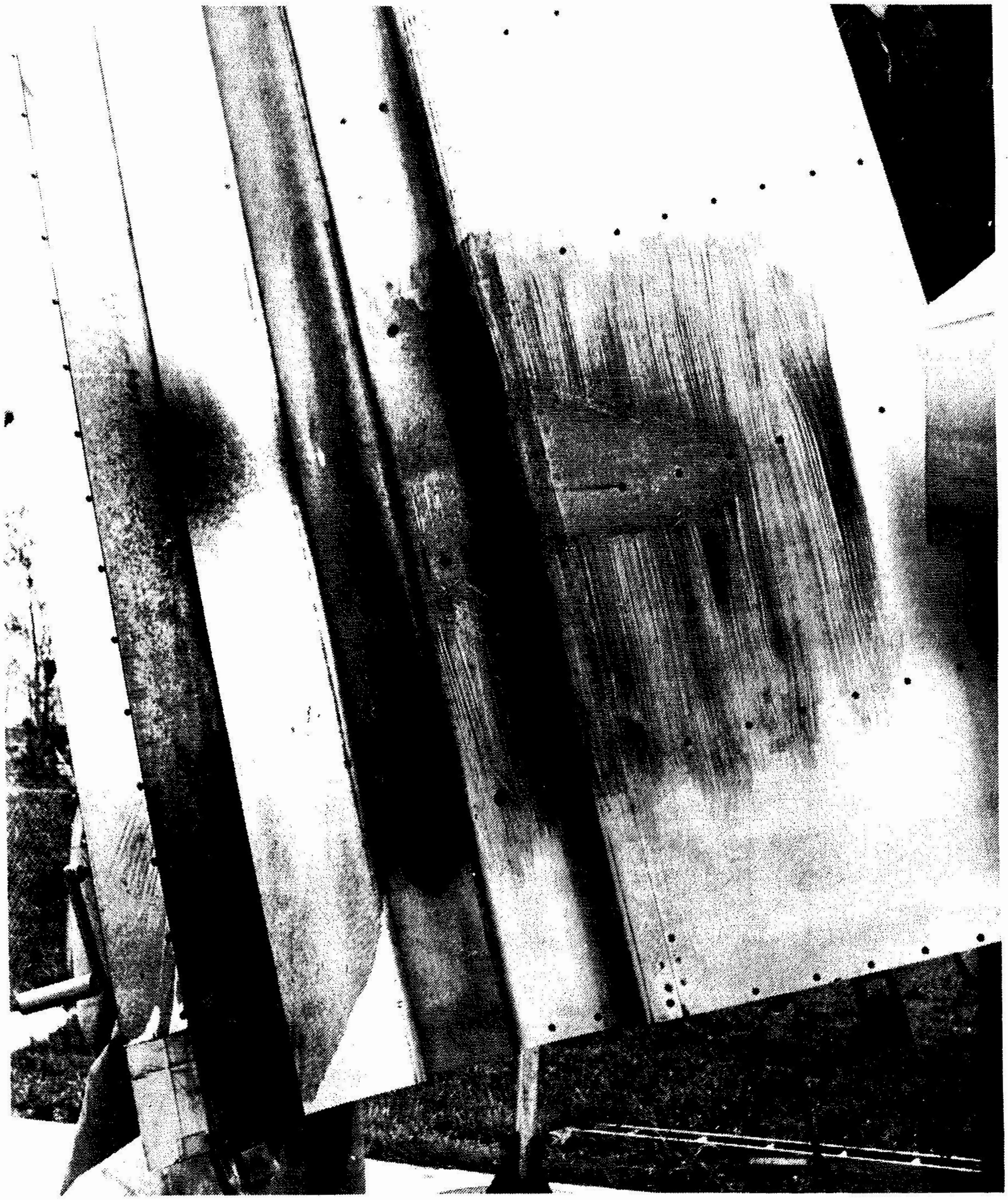


Figure 8-9.- Oil flow pattern on wing/flap. Baseline A, landing.

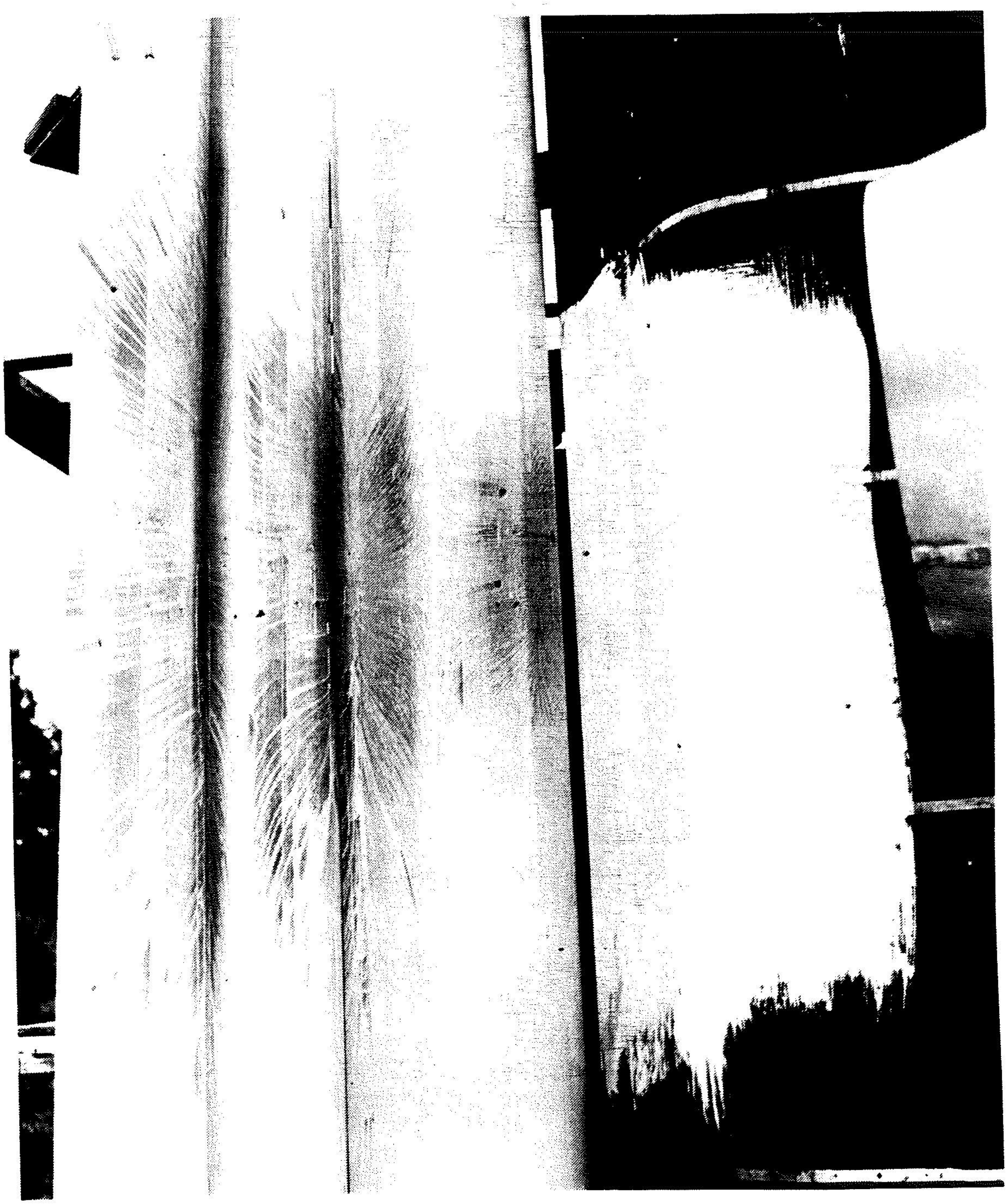


Figure 8-10.- Oil flow pattern on wing/flap. Baseline B.

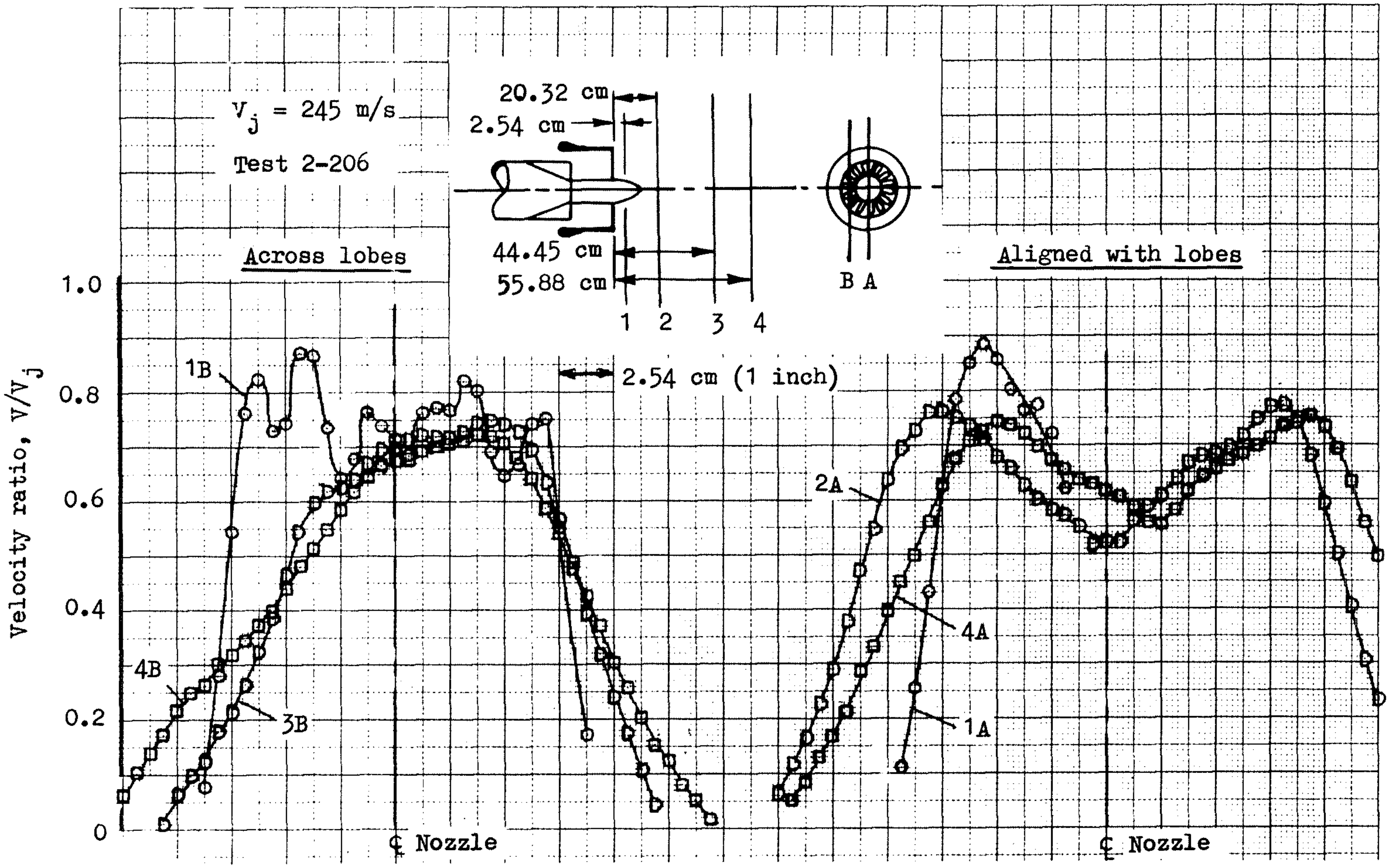


Figure 8-11.- Velocity profiles. Mixer nozzle with treated ejector.

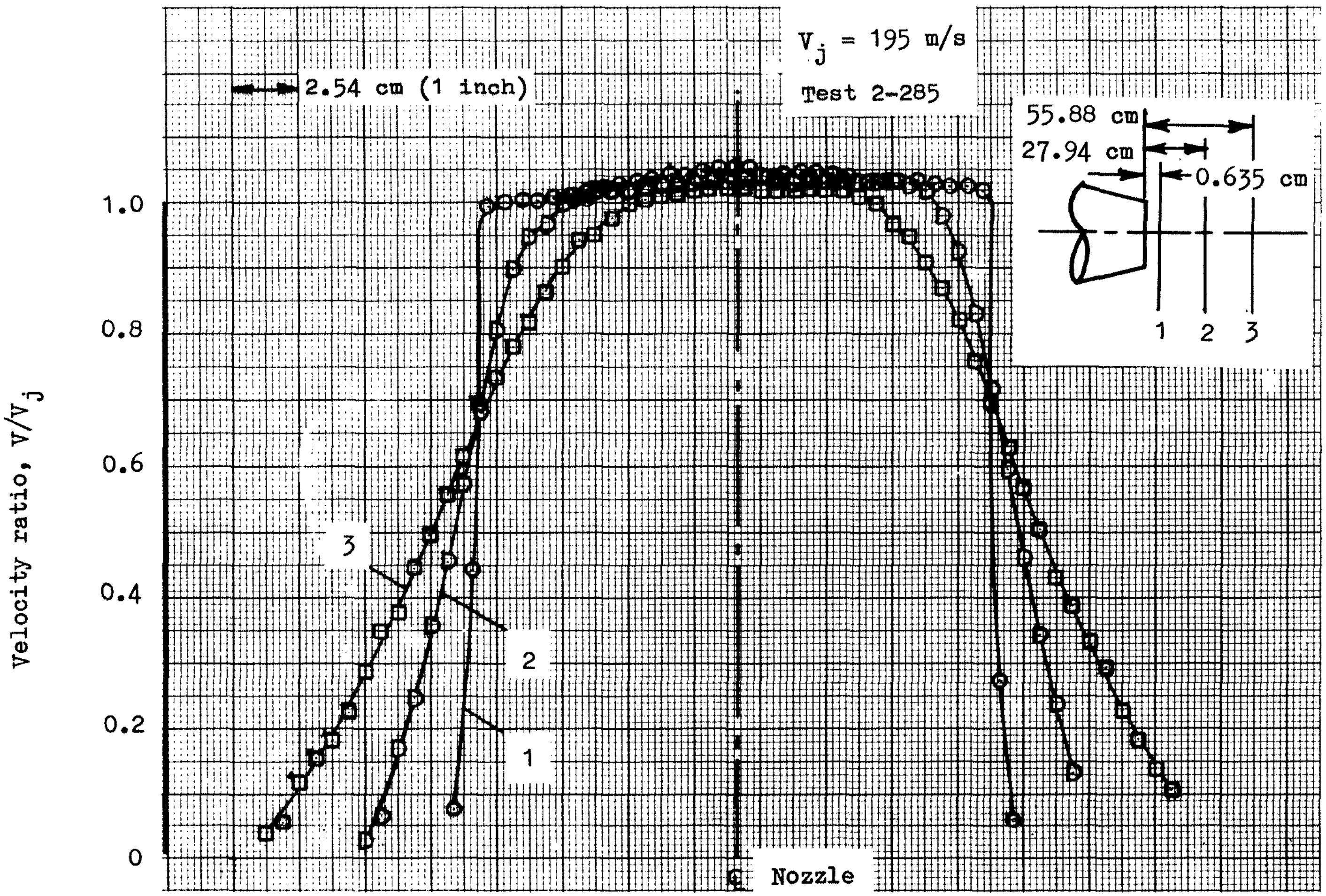


Figure 8-12.- Velocity profiles. 20.19-cm conical nozzle.

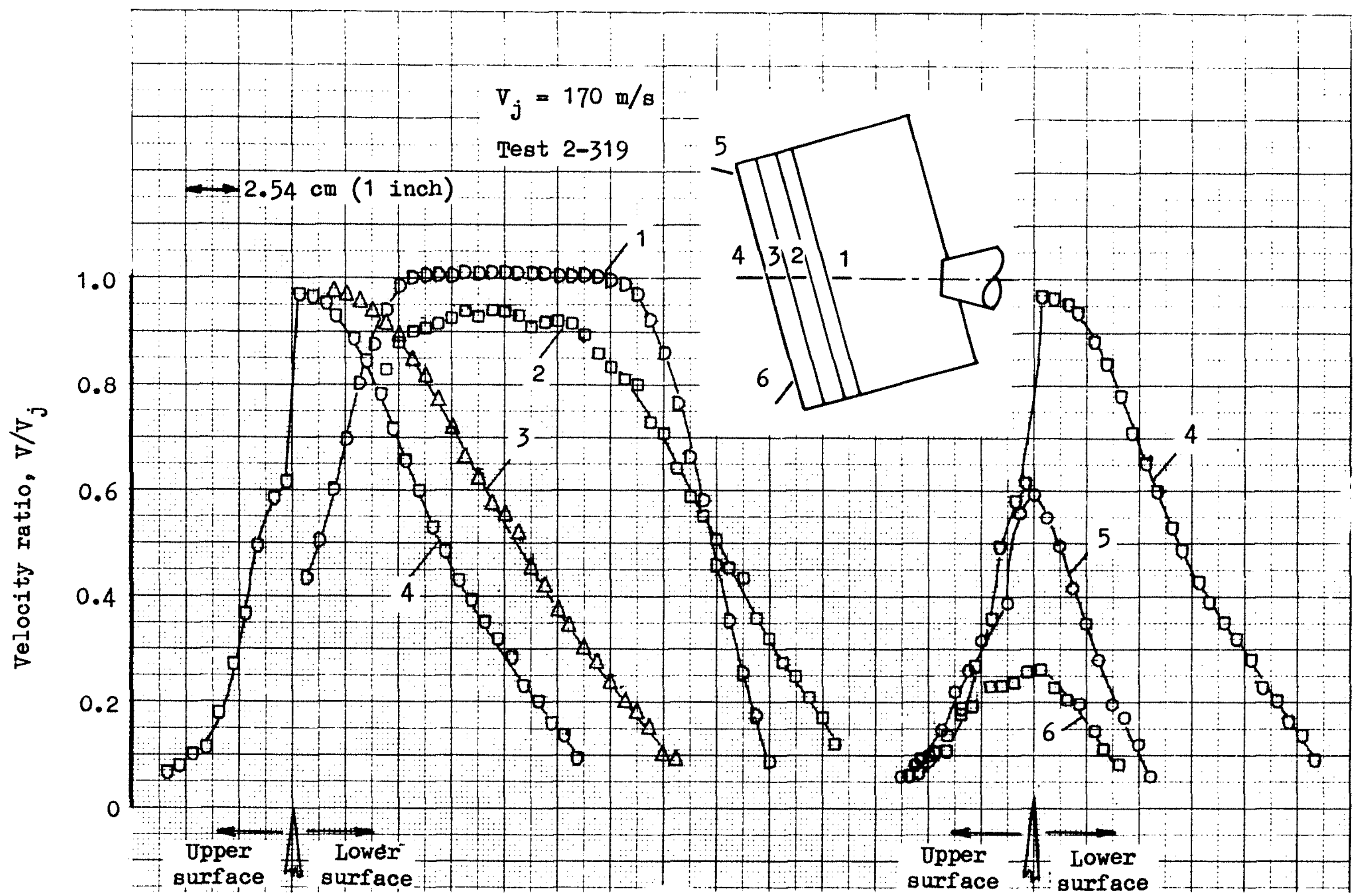


Figure 8-13.- Velocity profiles. Baseline A, takeoff. Series 2.

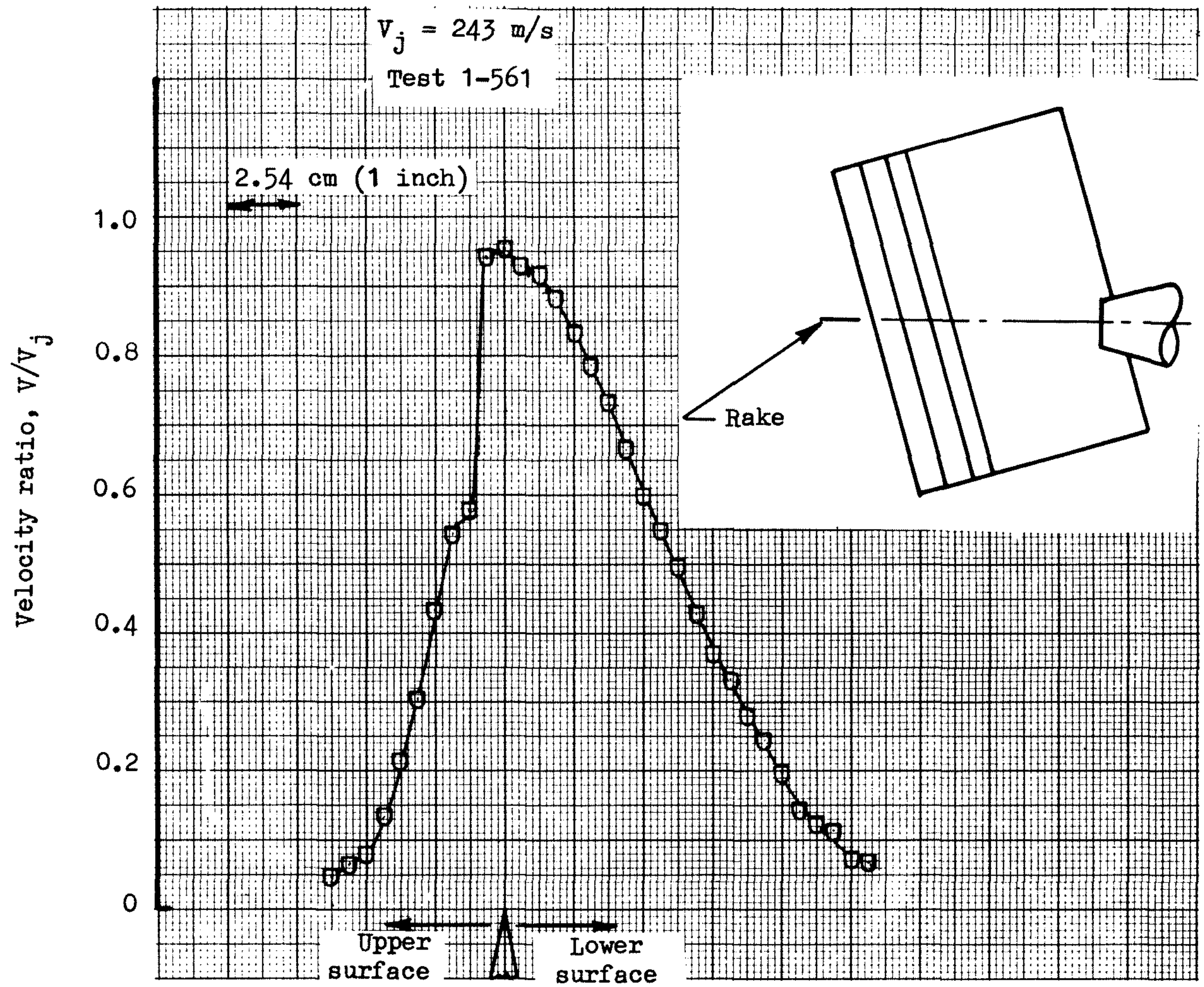


Figure 8-14.- Velocity profiles. Baseline A, takeoff. Series 1.

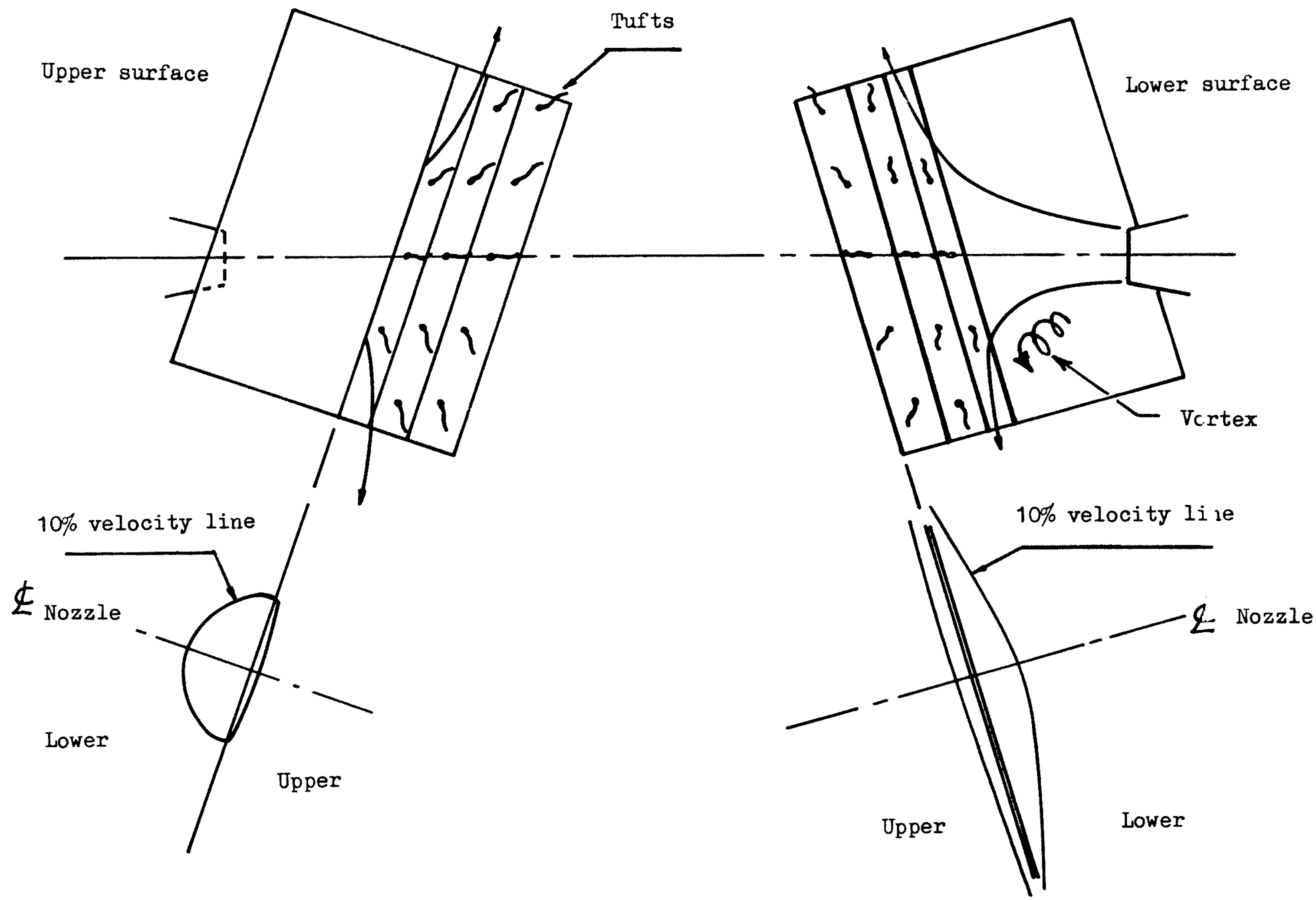


Figure 8-15. - Exhaust flow field on flap. Baseline A, takeoff. V_j = 170 & 245 m/s.

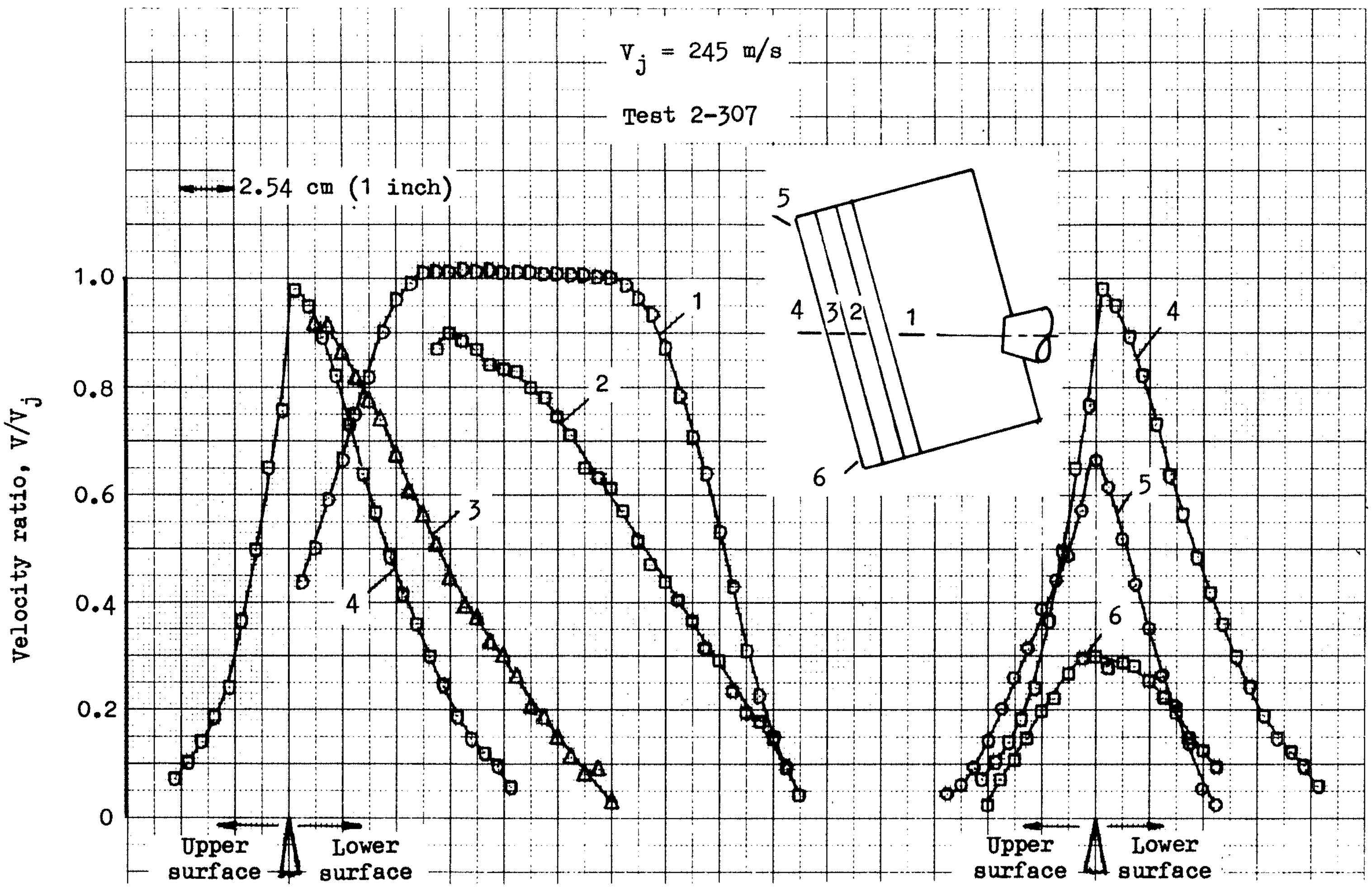


Figure 8-16.- Velocity profiles. Baseline A, landing.

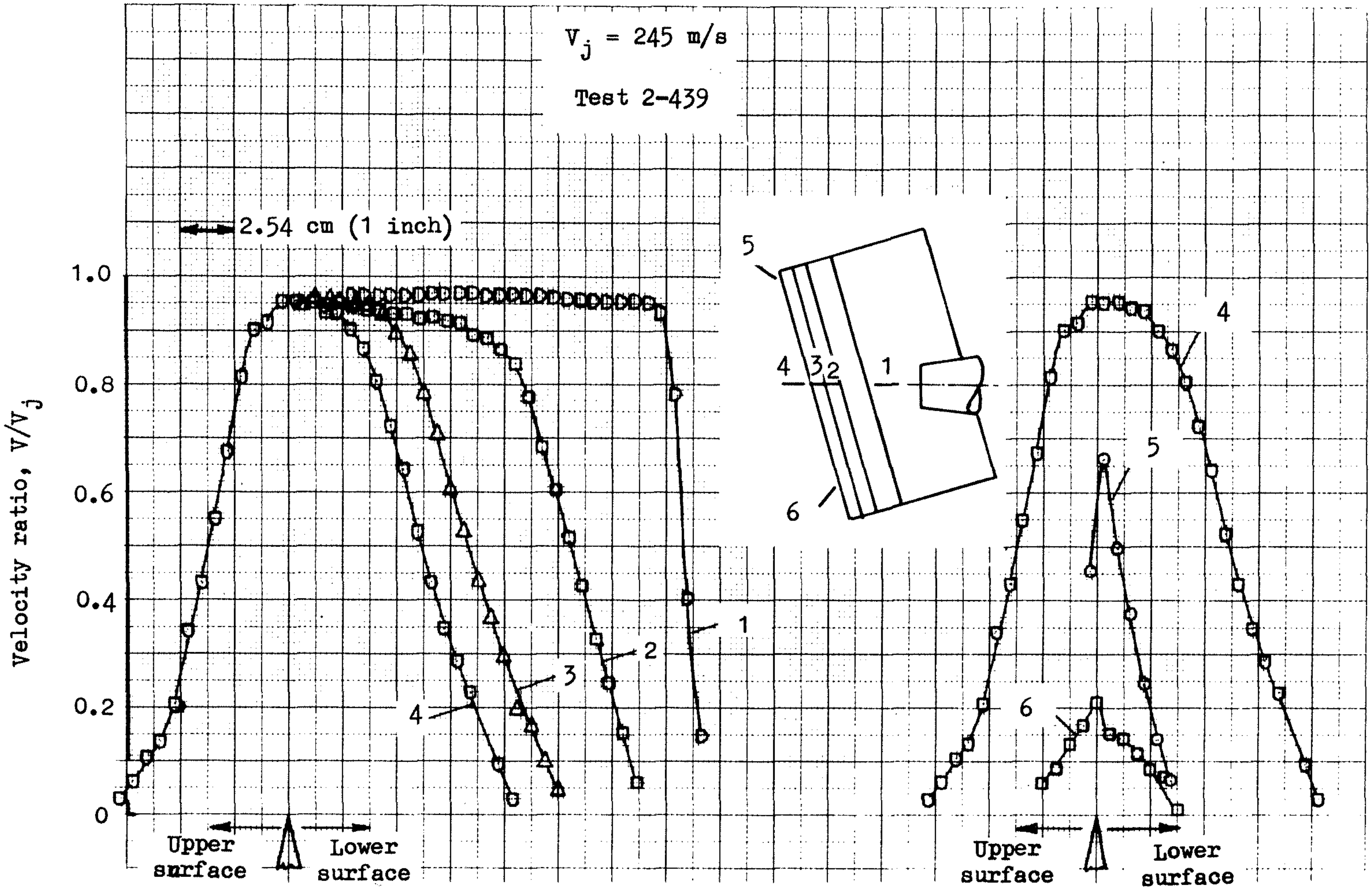


Figure 8-17.- Velocity profiles. Baseline B with 17.65-cm conical nozzles, 0.262-rad trailing edge sweep, and standard third-flap gap. Takeoff.

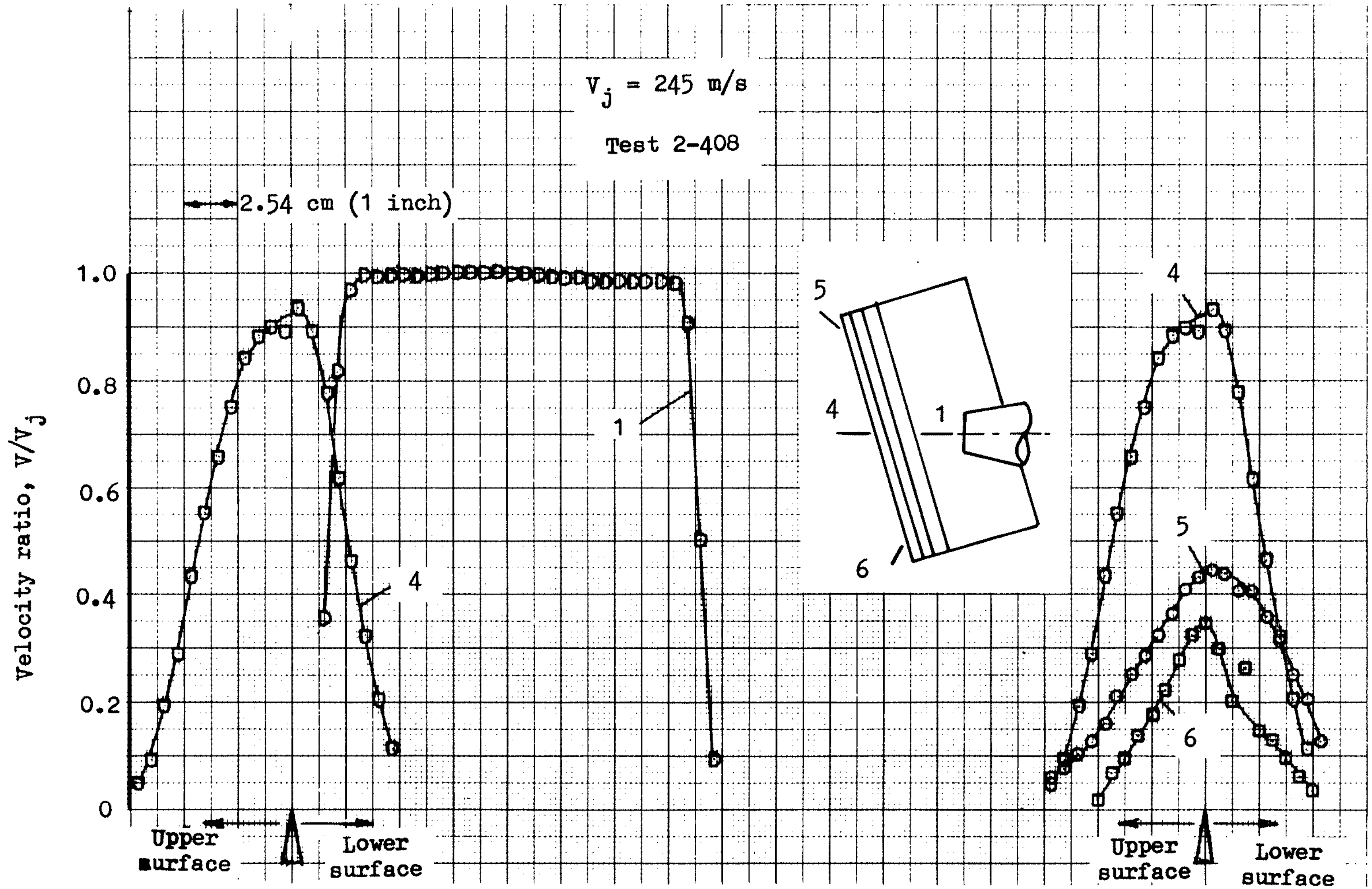


Figure 8-18.- Velocity profiles. Baseline B with 17.65-cm conical nozzle, 0.262-rad trailing edge sweep, and standard third-flap gap. Landing.

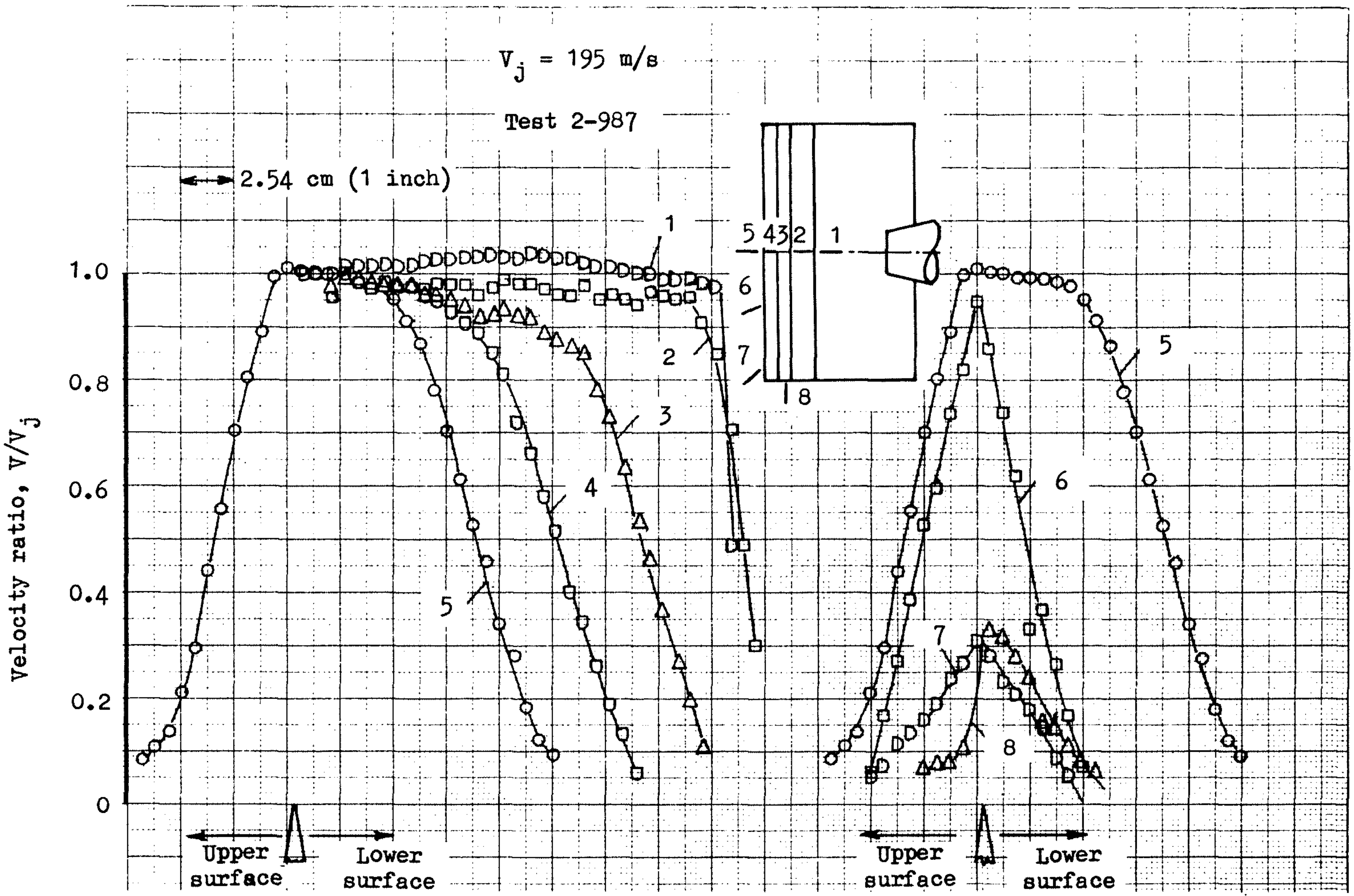


Figure 8-19.- Velocity profiles. Baseline B, takeoff.

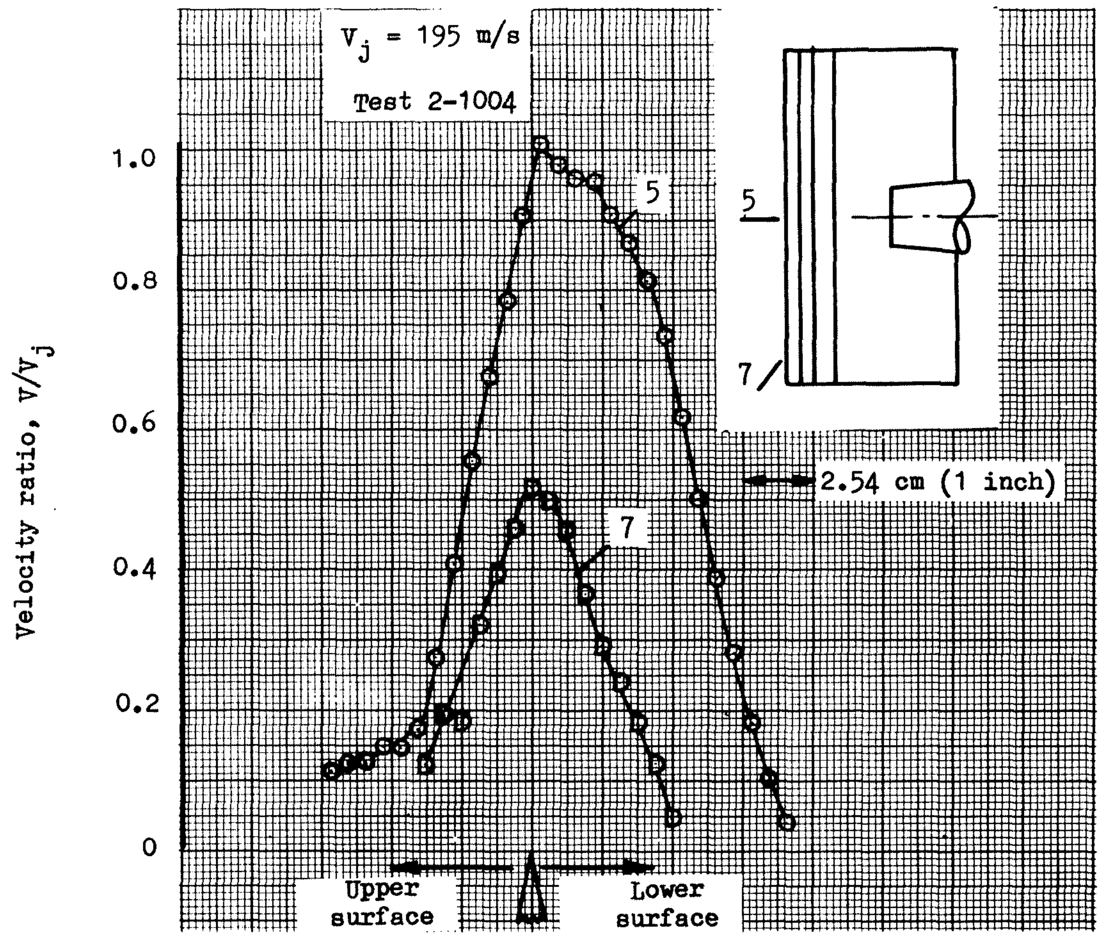


Figure 8-20.- Velocity profiles. Baseline B, landing.

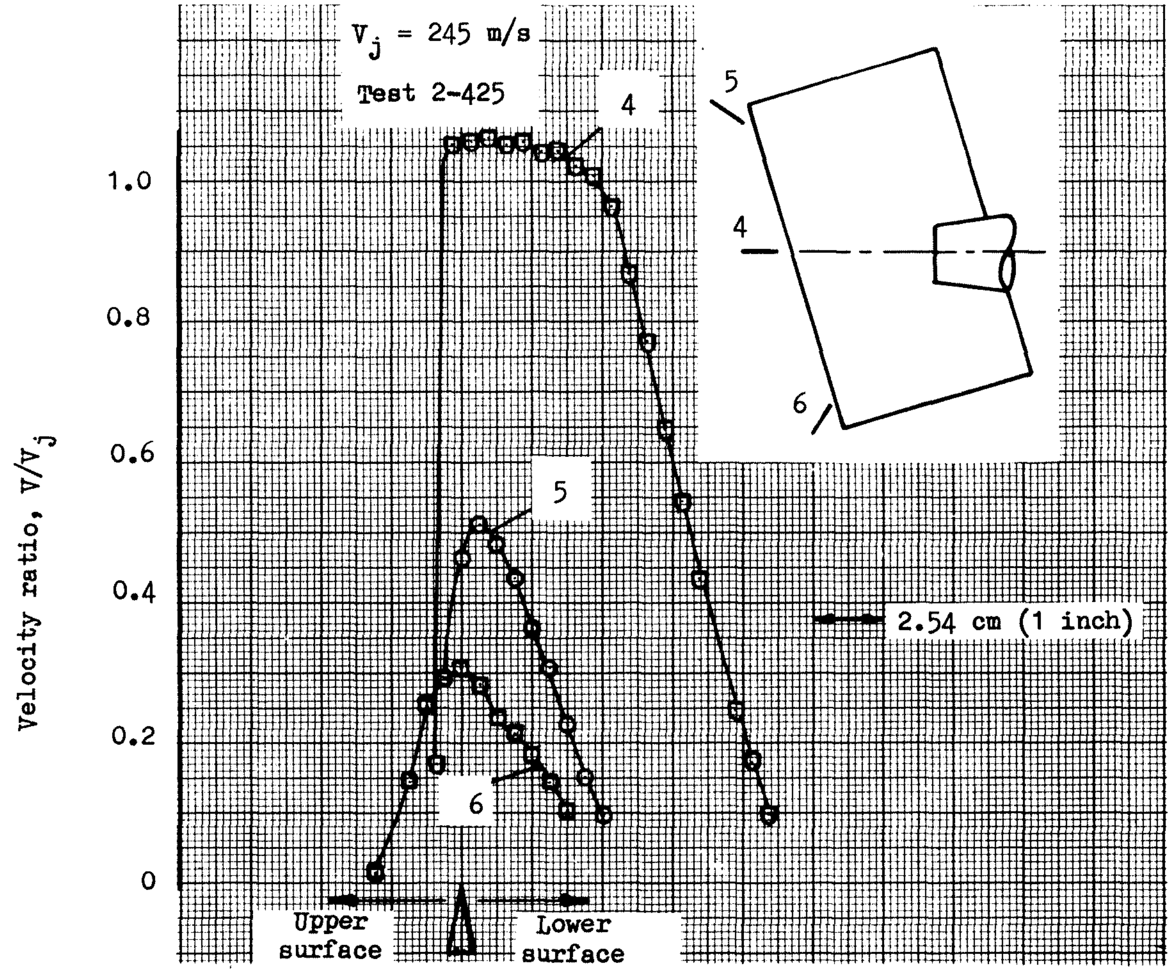


Figure 8-21.- Velocity profiles. Baseline B with 17.65-cm conical nozzle, 0.262-rad trailing edge sweep, standard third-flap gap, and fairing. Takeoff.

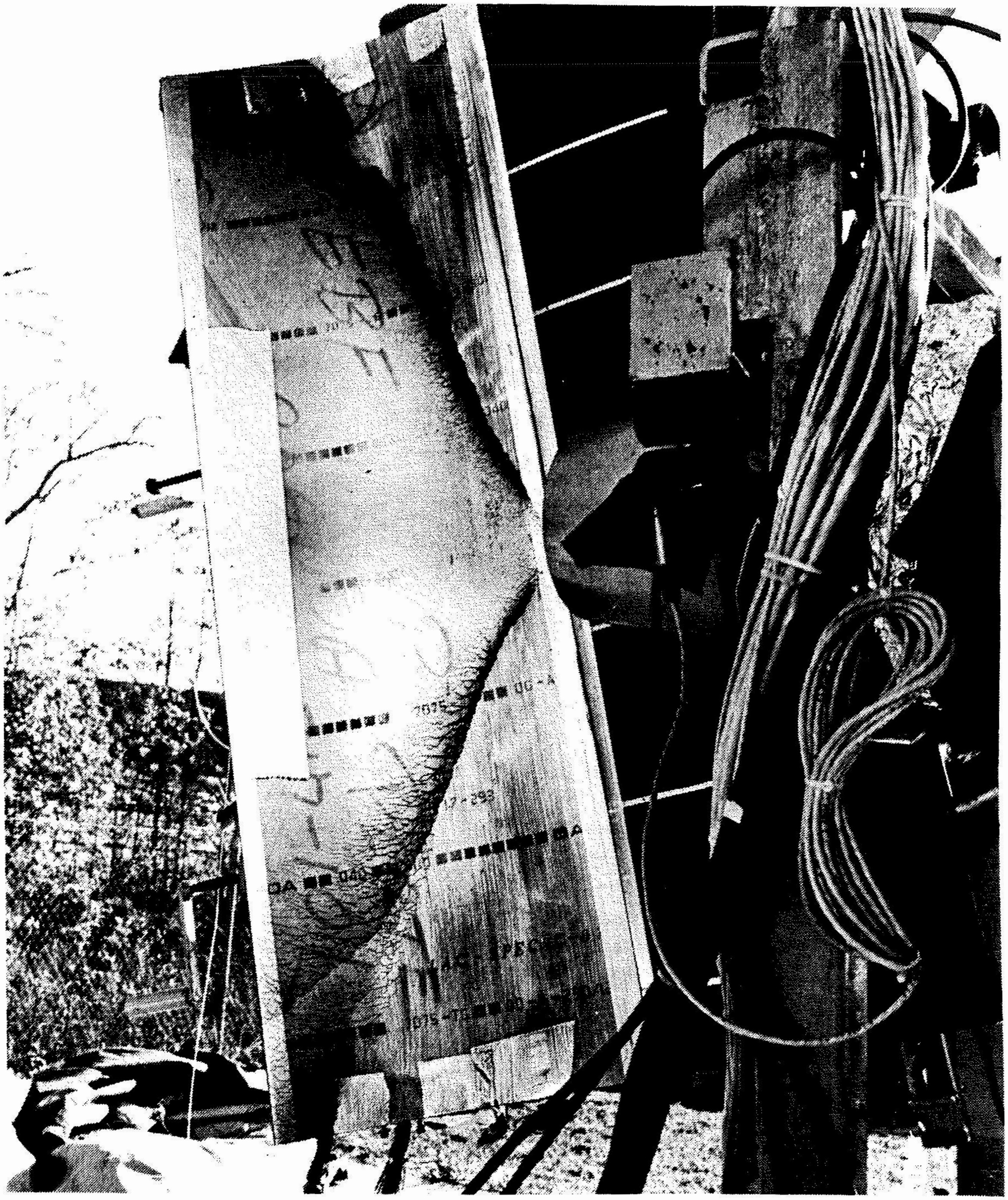


Figure 8-22.- Oil flow pattern on wing/flap. Baseline B with one-piece fairing and 0.262 rad (15°) sweep. Takeoff.

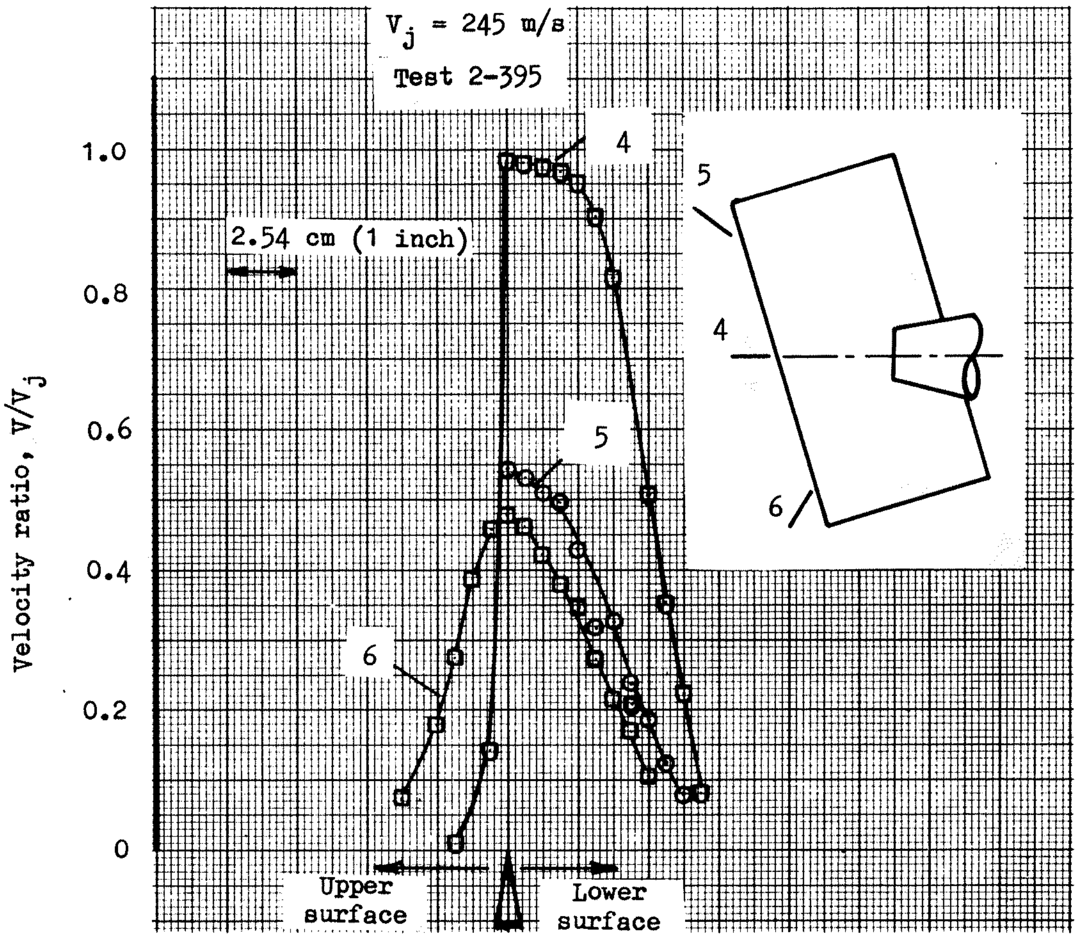


Figure 8-23.- Velocity profiles. Baseline B with 17.65-cm conical nozzle, 0.262-rad trailing edge sweep, standard third-flap gap, and fairing. Landing.

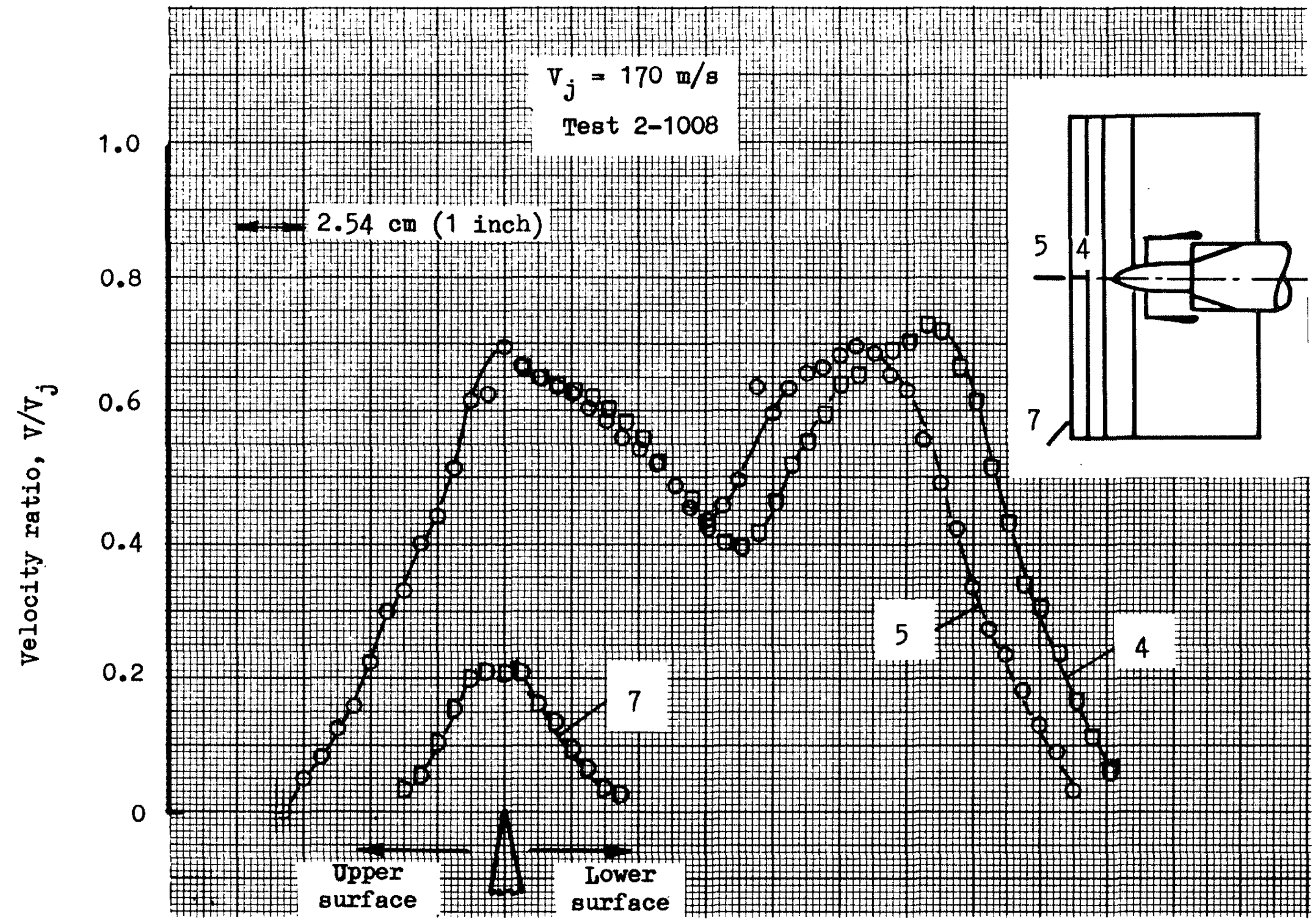


Figure 8-24.- Velocity profiles. Baseline B with mixer nozzle and treated ejector. Takeoff.

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9. WIND TUNNEL ACOUSTIC RESULTS

Anechoicity

To determine acoustic conditions within the treated wind tunnel, measurements of jet noise were made from the nozzle to the wall, normal to the jet centerline. The purpose was to identify 1) the acoustically-direct field, 2) the Hall radius, 3) the acoustically-reverberant field and 4) any standing wave patterns, all as a function of frequency. The results for one-third-octave band levels whose center frequencies range from 500 Hz to 80,000 Hz are shown in figure 9-1.

For frequencies greater than 2,000 Hz, which scales to 200 Hz for the full-scale aircraft, SPL falls off at a rate of 6 dB per doubling of distance at a radius of about 2.44 m (8 ft) - where the microphones were located. In the very-high-frequency bands the roll-off is even greater, indicating that atmospheric absorption is significant at the higher frequencies and larger radii. In the 500, 1,000, 1,250, and 1,600 Hz bands, the reduction of noise is close to 6 dB per doubling of distance.

The 630- and 1250-Hz bands indicate the presence of standing waves near the 2.44-m radius. These one-third-octave bands are therefore expected to read up to 5 dB high at this angle during the test. They correspond to 63 and 125 Hz full-scale. The other 22 one-third-octave bands have anechoic slopes at the selected radius. In addition the microphone distance is 27.5 nozzle diameters and is 4 wavelengths at the lowest frequency of interest, 500 Hz. These ratios indicate that far-field conditions should prevail.

The Hall radius, at which the direct noise level is equal to the reverberant noise level, is at least equal to the distance to the microphones for all one-third-octave bands. The only identifiable reverberation effects are at the previously mentioned 630 and 1250 Hz bands.

These results indicate that for practical purposes the acoustic radiation data are uninfluenced by the presence of the walls, floor, and ceiling, either in level or in directivity, and that the data represent free-field conditions.

Forward Speed Effects

Method of analysis.- Forward speed effects were determined from spectrum plots of the type shown in figure 9-2. (Refer to figure 5-7 to relate microphone number to location.) The curves plot the difference between SPL at forward speed and SPL at zero speed (tunnel off) against frequency, for each forward speed tested.

The curves reflect two effects. At the lower frequencies, jet/flap interaction noise is overwhelmed by the noise of the tunnel itself. The recorded signal is essentially wind tunnel background noise, which increases rapidly with decreasing frequency and increasing forward speed.

Above a cutoff frequency, which increases with increasing tunnel speed, tunnel noise fades out, leaving a region of uncontaminated jet/flap interaction noise. In most cases the plotted differences in this region are reasonably consistent over the frequency range and are monotonic functions of forward speed. Forward speed effect is calculated from the curves by averaging the plotted dB differences (at a given forward speed) over the region from the cutoff frequency to 80,000 Hz. The cutoff frequency, listed on the curves, is the frequency above which the total signal exceeds the tunnel noise level (jet off, at the same forward speed, from curves not presented) by at least 10 dB.

Jet-alone results.- Figure 9-3 plots SPL increment, obtained as explained above, against forward speed. With few exceptions the trends are linear out to 41.2 m/s (80 kn), the highest forward speed tested.

Figure 9-3(a) shows the effect of forward speed on jet-alone noise. At angles of 1.572-2.094 rad (90-120°) aft the reductions due to forward speed are about 10% less than is predicted by relative velocity (jet velocity minus forward speed) to the sixth power. The V_{rel}^{6} line is shown on all sheets of figure 9-3 as a visual reference, although it is applicable only to the jet noise component of the total.

Lower effects of forward speed on jet noise were found at the forward and aft angles than at the central angles. The data of von Glahn and

Goodykoontz (ref. 9) are shown for comparison. Their data, obtained with a smaller nozzle in a 33-cm-diameter freestream flow, equal or exceed the relative velocity to the sixth power theory even at the most aft angle.

Jet/wing flap results.- Figures 9-3(b) through (e) show the effect of forward speed on noise for the following conditions:

Figure 9-3(b) - Flyover, triple-slotted flap
Figure 9-3(c) - Flyover, single-slotted flap
Figure 9-3(d) - Sideline, triple-slotted flap
Figure 9-3(e) - Sideline, single-slotted flap

Three trends are apparent in the curves -

- Azimuth angle. (Refer to each figure individually.) Noise reduction with forward speed is maximum at the central angles and smaller or negative at the forward and aft angles. This pattern is similar to the variation of the jet-alone curves (fig. 9-3(a)).

- Elevation angle. (Compare figure 9-3(b) with (d), and 9-3(c) with (e).) Noise reduction is maximum in the flyover plane and becomes progressively smaller or negative as elevation angle decreases to the sideline plane and thence to the wingtip.

- Number of slots. (Compare figure 9-3(b) with (c), and 9-3(d) with (e).) Noise reduction is greater with single-slotted than with triple-slotted flaps.

The effect of incorporating the perforated third flap on the baseline was determined at a few points, plotted in figures 9-3(b) and (d). No difference between the perforated and solid third flap can be seen.

Figure 9-4 presents a series of cross-plots of figure 9-3 against angle aft, at the tested forward speeds. The trends shown in these curves have been discussed in connection with figure 9-3.

Little information on forward speed effects on EBF systems is available in the literature for comparison to the present data. Falarski (ref. 10)

tested a nearly-full-sized turbine-powered model in a reverberant tunnel. He reported a reduction of 1-2 dB at 30.9 m/s (60 kn) at an angle that appears to be about 2 rad (120°) aft and 0.8 rad (45°) below the wing. The present data show an increase of about 3 dB at this location (fig. 9-3(e)) but are consistent with his results if his microphone was in fact somewhat farther forward.

Goodykoontz (ref. 11) reports a decrease of 2-3 dB at 51.5 m/s (100 kn) in tests of a small model on an outdoor rig. He reports a decrease of 3 dB at central flyover microphones, which is in reasonable agreement with the present data, considering the difference in flap and nozzle design. Goodykoontz, however, shows less reduction in forward speed effect at the forward microphones than do the present data, and reports an increase in forward speed effect to -5 dB at the aft angles, while the present data show a marked decrease. A difference in the relative proportion of flap interaction noise and jet noise between this model and the present models may account for some of the discrepancy.

Interpretation of results.- The trends of forward speed effect with azimuth angle, elevation angle, and number of flap slots, discussed above, are tentatively explained below on the basis of two noise sources (jet noise and slot exit flap interaction noise) which differ in speed characteristic, shape, location, and effect of additional flap slots -

	Jet noise	Slot exit flap interaction noise
Effect of fwd speed -	Noise decreases	Noise increases
Shape -	Cylinder, then sheet	Sheet(s)
Location -	Forward and below	Aft
Effect of more slots-	No effect	Noise increases

Other sources, such as wing scrubbing noise and flap leading edge, scrubbing, and whole-body noise, are immersed in the jet and thus are minimally affected by freestream velocity.

Jet noise. Jet noise is the noise developed in the jet and jet/free-

stream mixing region, from the nozzle to the deflected jet sheet downstream of the flaps. Jet noise decreases with forward speed, as was discussed earlier. The decrease is greatest at the central angles (near the nozzle exit plane) and smaller at forward and aft angles.

The jet noise region in an EBF configuration comprises an expanding cylinder forward of the flaps and a jet sheet that starts forward of the flaps and extends downstream of the last trailing edge. Microphones in the forward quadrant of the flyover plane are exposed to noise from the whole region; microphones at lower elevation angles have an unobstructed view of the cylindrical part of the jet but an increasingly edge-on, rather than frontal, view of the sheet; aft microphones are shielded from all portions except the final sheet downstream of the flaps.

Slot exit flap interaction noise. This noise is the noise created by the slot exit flow and its interaction with the flap upper surface and trailing edge and with the freestream. It increases, rather than decreases, with increasing forward speed, because the pressure field behind the flaps becomes increasingly negative as forward speed increases, inducing higher slot exit velocities. Since slot inlet total pressure is dictated by nozzle pressure ratio and is independent of forward speed, the reduction in static pressure downstream of the slot causes an increase in slot exit velocity and thus in slot exit flap interaction noise.

The expected increases in slot exit velocity with forward speed appear to be consistent with the observed noise increases. Surface pressure distributions were not measured in the present program. Other data, however, (for example, reference 12) show pressure coefficients (C_p's) of -5 to -15 at the slot exit in the blown region of an EBF system. Assuming a C_p of -10, a noise-velocity exponent of 8, and a nozzle exit velocity of 245 m/s, yields a calculated noise increase at 41.2 m/s (80 kn) of 3.5 dB. This happens to be almost the same value as the maximum noise increase observed in the test program (fig. 9-3(d)). The agreement is fortuitous; the assumed C_p and exponent are probably in error, and the observed noise increaseis the composite effect of many sources. The underlying mechanism for an increase

in slot exit flap interaction noise with forward speed is considered, however, to be valid.

The slot exit flap interaction noise field can be expected to form a series of sheets, one for each slot, which radiate most strongly to microphones behind and above the flaps. Microphones off to the side should be influenced by the fact that they see (to the degree dictated by their locations) the edges rather than the faces of the sheets.

Combined effects. Table 9-I shows how the characteristics of the two noise-source fields combine to explain qualitatively how forward speed effect on noise varies with view angle and configuration (single-slotted or triple-slotted flaps). The table lists noise increments for a forward speed of 41.2 m/s (80 kn), as read (or in three cases extrapolated) from figure 9-3. The notes relate the measured forward speed effects to the noise characteristics and noise field geometry discussed in the preceding paragraphs. The notes **summarize previous text and are not further discussed.**

Application of results.- It seems reasonable to assume, on the basis of the curves of figure 9-2 and similar curves for other configurations, not presented, that the forward speed effects developed herein are applicable to the entire spectrum and thus to OASPL and PNL. Low-frequency data were not used in deriving the present results but there is no indication that frequency has a significant effect on noise increment. It is suggested that the present results, with judicious consideration of configuration differences, can be used to estimate forward speed effects on other flap designs.

Acoustic Data Correlations

Jet noise.- Jet noise data from the wind tunnel at zero forward speed and from the outdoor rig are compared below to jet noise data from references 13-16. The comparisons address velocity exponent, and spectrum shape, level, and directivity.

The experimental studies reported in references 13-16 were conducted in anechoic or outdoor environments, using small conical nozzles with cold flow, and are generally considered to be of excellent quality. The wind tunnel data from the present program are generally more extensive than those of the references in that (1) forward arc noise was measured and (2) although the jet was axisymmetric, measurements were taken at several locations around the jet. Further, the present data were obtained at frequencies up to 80,000 Hz. In the references, on the other hand, upstream noise suppression was more extensive than in the present test and the nozzle internal surfaces had smoother contours; the resulting nozzle mean velocity profiles and turbulence levels were not recorded, however. It is quite possible that the variation in jet decay rate associated with these parameters could explain observed differences.

Velocity exponent. OASPL velocity exponents from the references and the current program are summarized in the following table.

Velocity Exponent of OASPL

	Angle from nose, rad		
	0.524	1.572	2.618
Present program -			
Static rig, 17.67-cm nozzle -	7.3	7.3	7.9
Wind tunnel -	7.4	7.6	8.7
Lush (ref. 13) -	NR	7.5	9.0
Ahuja & Bushell (ref. 14) -	NR	8.0	8.8
Tanna & Dean (ref. 15) -	NR	7.5	8.9
Olsen, Gutierrez, & Dorsch (ref. 16) -	*	*	*

NR - Not reported
* - Not reported. Exponent of spherical acoustic power = 8.0.

The exponents obtained in the present program tend to be slightly lower than those from other sources but are in general agreement both in magnitude and in variation with angle.

Spectra.- Spectra from the present program and other sources, normalized to wind tunnel conditions, are compared in figure 9-5. Figures 9-5(a) and

9-5(b) present comparisons at four circumferential angles in the nozzle exit plane, where the effects of refraction and convection on directionality are minimized. The wind tunnel spectra (fig. 9-5(a)) exhibit SPL increases at 500 and 630 Hz, which are probably associated with standing waves in the tunnel. Standing-wave effects in this frequency range were noted in the discussion of wind tunnel acoustics (fig. 9-1). Except for the spectrum at $\phi = 0$, which appears to have a 2-dB measurement error, the wind tunnel spectra agree well with each other.

The outdoor rig spectra of figure 9-5(a) are also internally consistent and are approximately 4.5 dB higher than the wind tunnel spectra. Figure 9-5(b) shows that these two groups of spectra straddle the data from references 13-16, which have been normalized to the wind tunnel conditions as carefully as possible. Velocity corrections were minimized by selecting velocities as close as possible to the normalized velocity. The one-third-octave-band frequencies were adjusted for the Strouhal frequency shift. All data were measured in an anechoic environment so there were no ground reflection effects to be considered. The data of references 15 and 16 are "lossless", i.e., atmospheric absorption losses would reduce these spectra by about 0.5 dB at high frequencies. Further corrections due to ambient atmospheric pressure and temperature were not made because these conditions are not always defined in the references. These effects are considered to be $\pm$ 0.5 dB. Complete accounting for the environmental factors would presumably aid in further collapsing the data, although the spread shown generally amounts to some 2.5 to 3 dB and includes notable changes in spectral shape.

Figure 9-5(c) compares 1.046 rad (60°) aft of the nozzle. (Spectra at this angle are not reported in reference 16.) Here the wind tunnel and outdoor rig data show better agreement in themselves and are contained within the spread of the spectra from the references - about 5 dB, compared to 2.5, to 3 dB in the nozzle plane.

Little is available on jet noise in the forward quadrant. At $\theta = 1.048$ rad (60°), the present wind tunnel data are in good agreement (approximately

± 1 dB) with the data of reference 14. The data from the outdoor rig, however, are approximately 5 dB high.

There appears to be a difference between jet-alone noise measured at one-fifth scale on the outdoor rig and at one-tenth scale in the acoustically-treated wind tunnel, with the wind tunnel data indicating noise levels some 4 dB lower than the outdoor rig in the forward and mid locations and 2 dB lower in the aft quadrant, even after allowing for known differences. The velocity exponents and spectrum shapes and directivities, however, are similar. Similar discrepancies between jet-alone noise data from different types of facilities are indicated in unpublished data obtained by N. N. Reddy of Lockheed. There is some evidence that the environment (anechoic, reverberant, semi-reverberant, etc.) may cause this anomaly by modifying the radiation impedance at the source, thus affecting the acoustic power output of the jet. This phenomenon is partially, although not satisfactorily, discussed by Beranek in reference 17.

Jet/flap interaction noise.- Figures 9-6 through 9-10 compare the data on jet/flap interaction noise from three sources: the data on baseline B from the outdoor rig and from the wind tunnel are compared in figures 9-6 through 9-8, and the data on baseline A from the outdoor rig and from a full-scale test using a TF34 engine are compared in figures 9-9 and 9-10. The differences between tests are smaller than the jet-alone noise spread of approximately 5 dB, and in the case of the TF34/outdoor rig comparison are generally in the range of 0-1 dB.

Outdoor rig vs wind tunnel. Figure 9-6 shows how the curves of PNLM vs V_j from the outdoor rig and wind tunnel compare. The wind tunnel data are lower, as in the case of jet-alone noise, the difference ranging from 0 to 3 dB. The V_j exponent is 8.2 for the wind tunnel and 7.0 for the outdoor rig, which also parallels the trend of the jet-alone exponents.

Figure 9-7 shows the outdoor rig circumferential directivity pattern in the nozzle exit plane, with the corresponding wind tunnel points at elevation angles of 0.524 and 1.572 rad (30° and 90°). The wind tunnel data

at elevations of 0 and 1.048 rad (0° and 60°) are suspect in this data set and are not shown, but the wind tunnel directionality pattern is expected to follow that of the outdoor rig. The PNLM differences just noted - 1.2 PNdB at flyover and 0.4 PNdB at 0.524-rad (30°) sideline - agree exactly with those obtained by averaging the differences over all microphones in the respective planes.

Flyover spectra from the two tests are compared in figure 9-8. The wind tunnel spectra were measured anechoically; the outdoor spectra were converted to anechoic conditions by calculating, and correcting for, the effect of ground reflection in each one-third-octave band in the low-frequency range. At 1.048 and 1.572 rad (60° and 90°) from the nose the outdoor rig spectra are 2-3 dB higher up to 3000-5000 Hz and very close at higher frequencies. The PNL differences associated with these spectra, from top to bottom on the figure, are +1.7, +1.4, and -0.4 PNdB, where positive indicates that the outdoor results are higher.

In sum the acoustic data from the two facilities differ by about 1 PNdB at 195 m/s jet velocity (the outdoor data being higher) and yield very similar one-third-octave-band spectra at several locations. Considering the differences between the two-dimensional outdoor model and the three-dimensional wind tunnel model, the agreement between the two sets of results is considered to be very good.

Outdoor rig vs TF34 test. This comparison is presented in figures 9-9 and 9-10. The tests of the TF34 engine with the baseline A wing/flap are described in reference 18. The data used, however, are not included in the reference but are unpublished data for the internal-mixing nozzle shown below.

This nozzle gave the most uniform conditions at the nozzle exit plane and thus most nearly approximated the outdoor rig test.

Figure 9-9 shows that when the data for baseline A in the present outdoor rig tests are corrected to the TF34 nozzle area and exit temperature, the flyover PNLM vs V_j curves for the two facilities coincide exactly. The directivity patterns in the nozzle exit plane (fig. 9-10) differ by 2 dB at 0 elevation angle but agree within 1 dB or less at most other angles. It is concluded that the one-fifth-scale outdoor facility provides a realistic simulation of full-scale conditions.

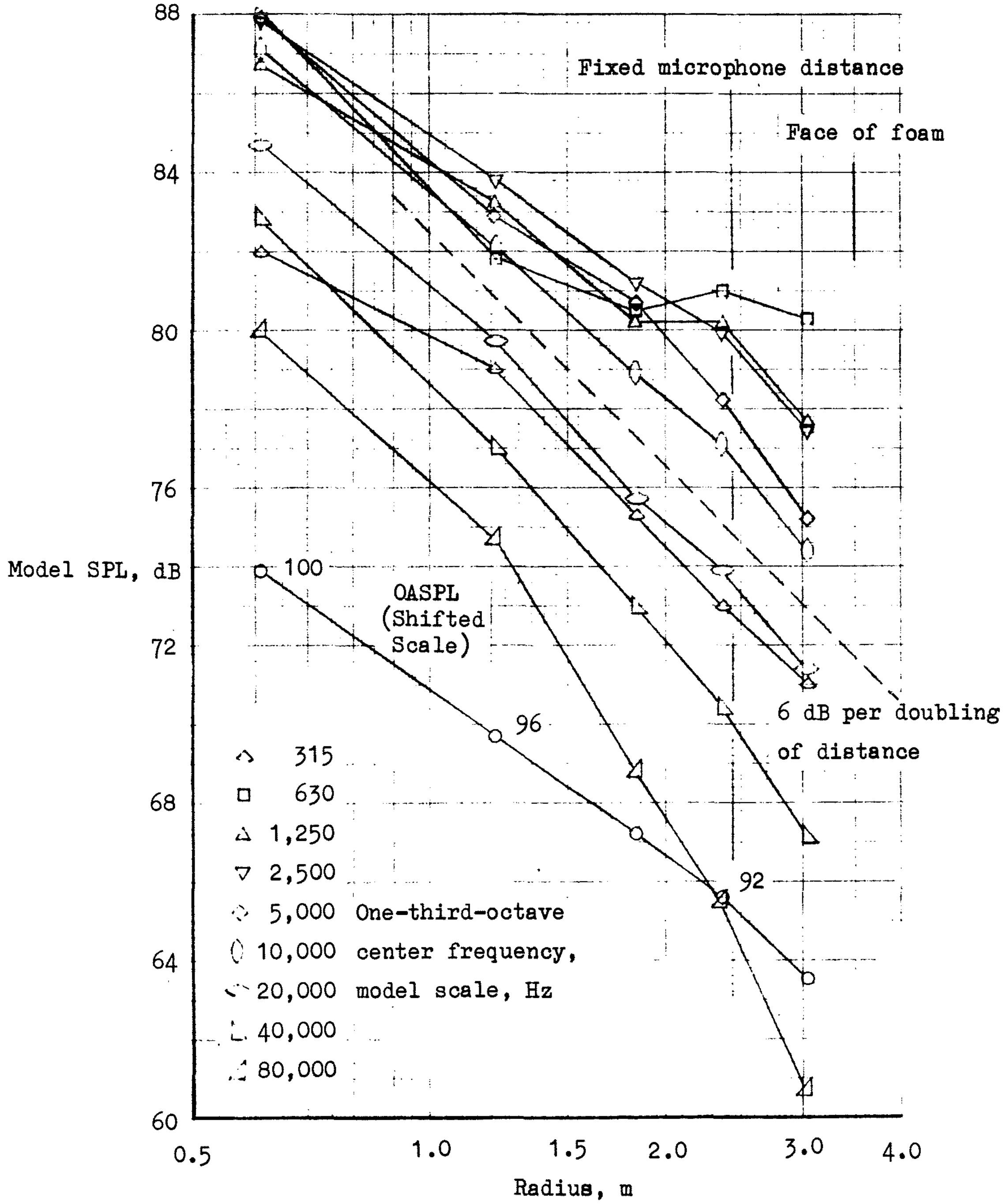
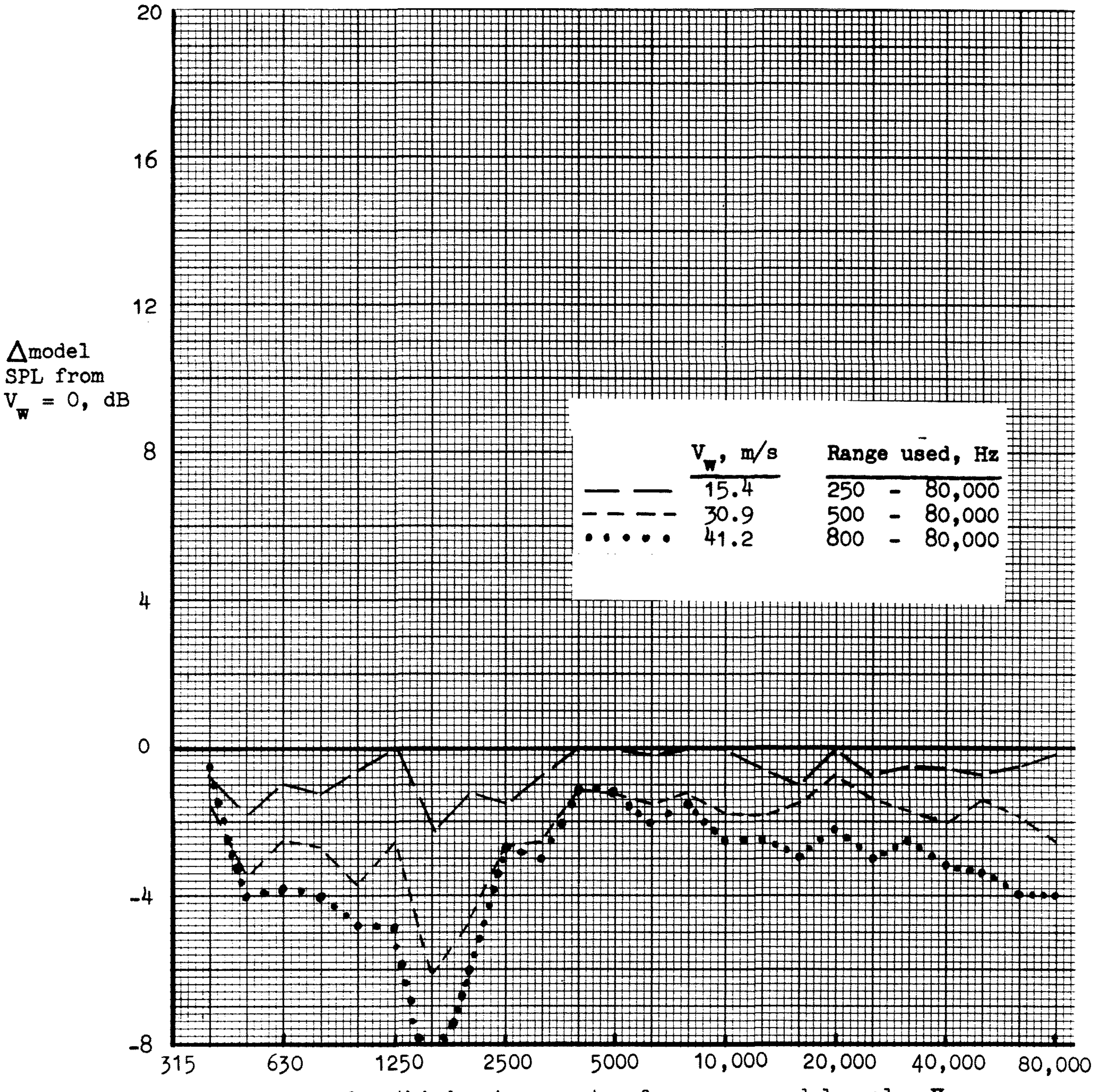
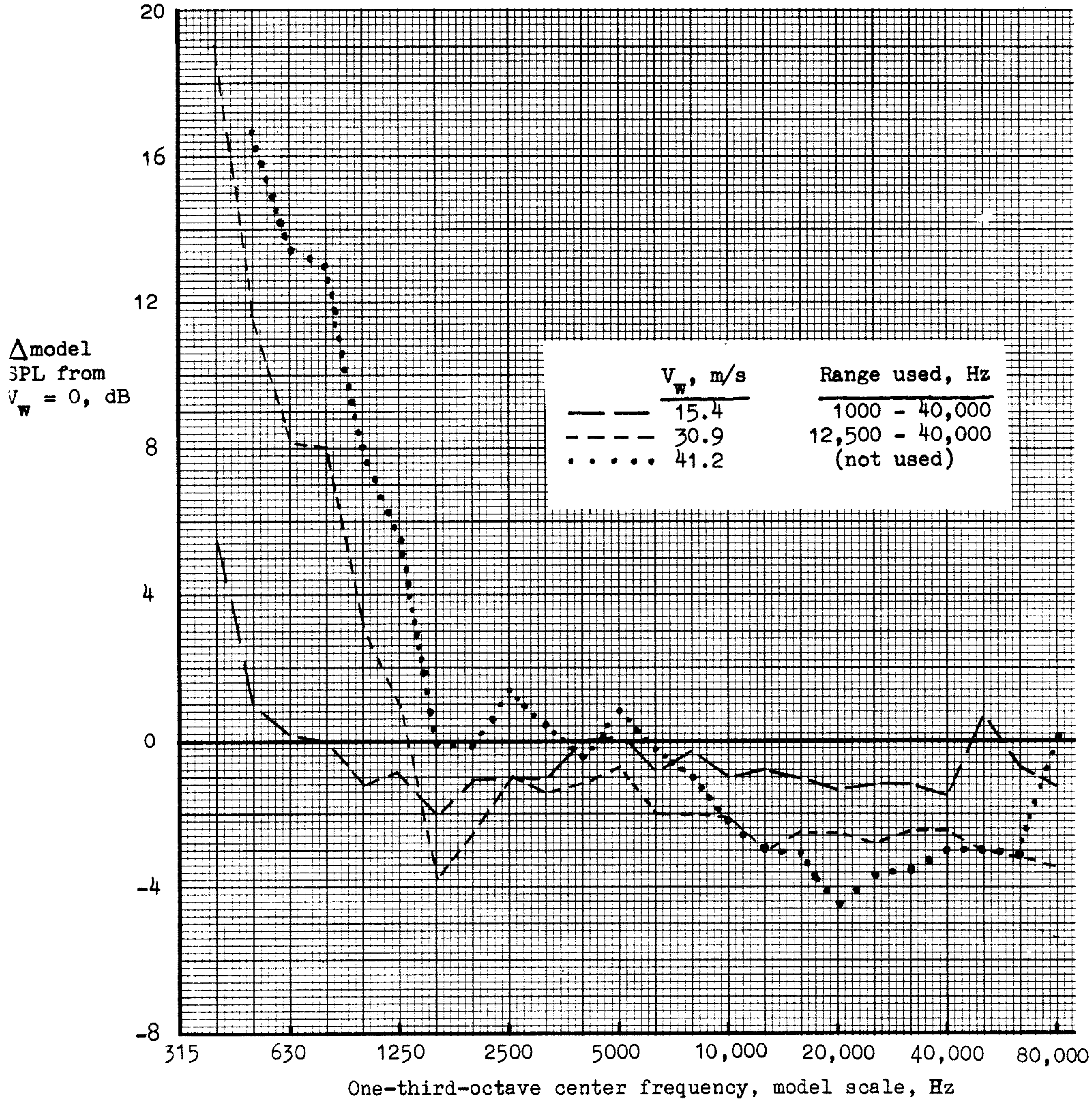


Figure 9-1.- Distance roll-off in wind tunnel, jet alone. Microphone at nozzle height on radius normal to centerline. V_j = 195 m/s.



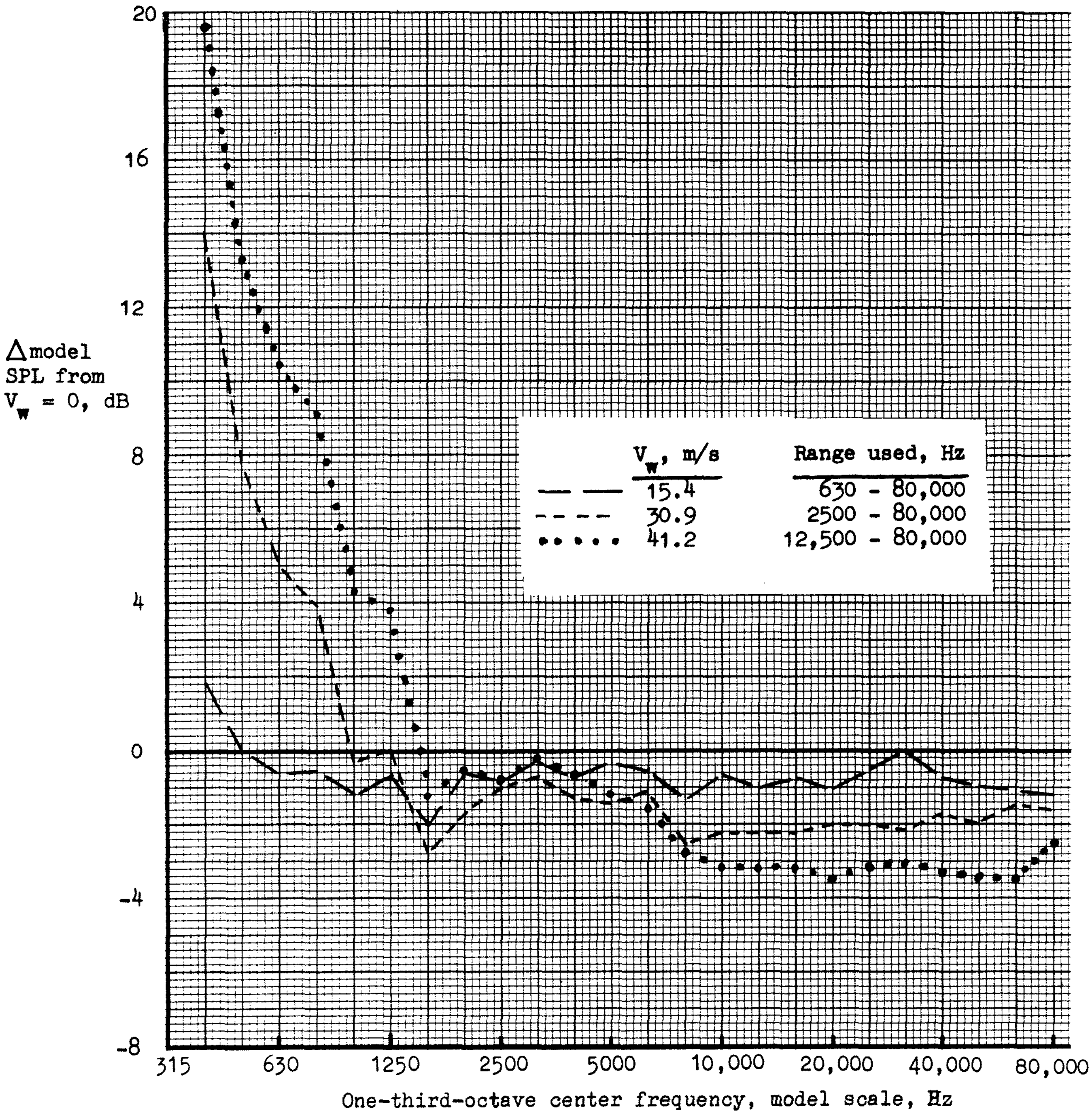
(a) Microphone 2.

Figure 9-2.- Effect of forward speed on noise spectra. Jet and baseline wing/flap configuration, takeoff setting. V_j = 245 m/s.



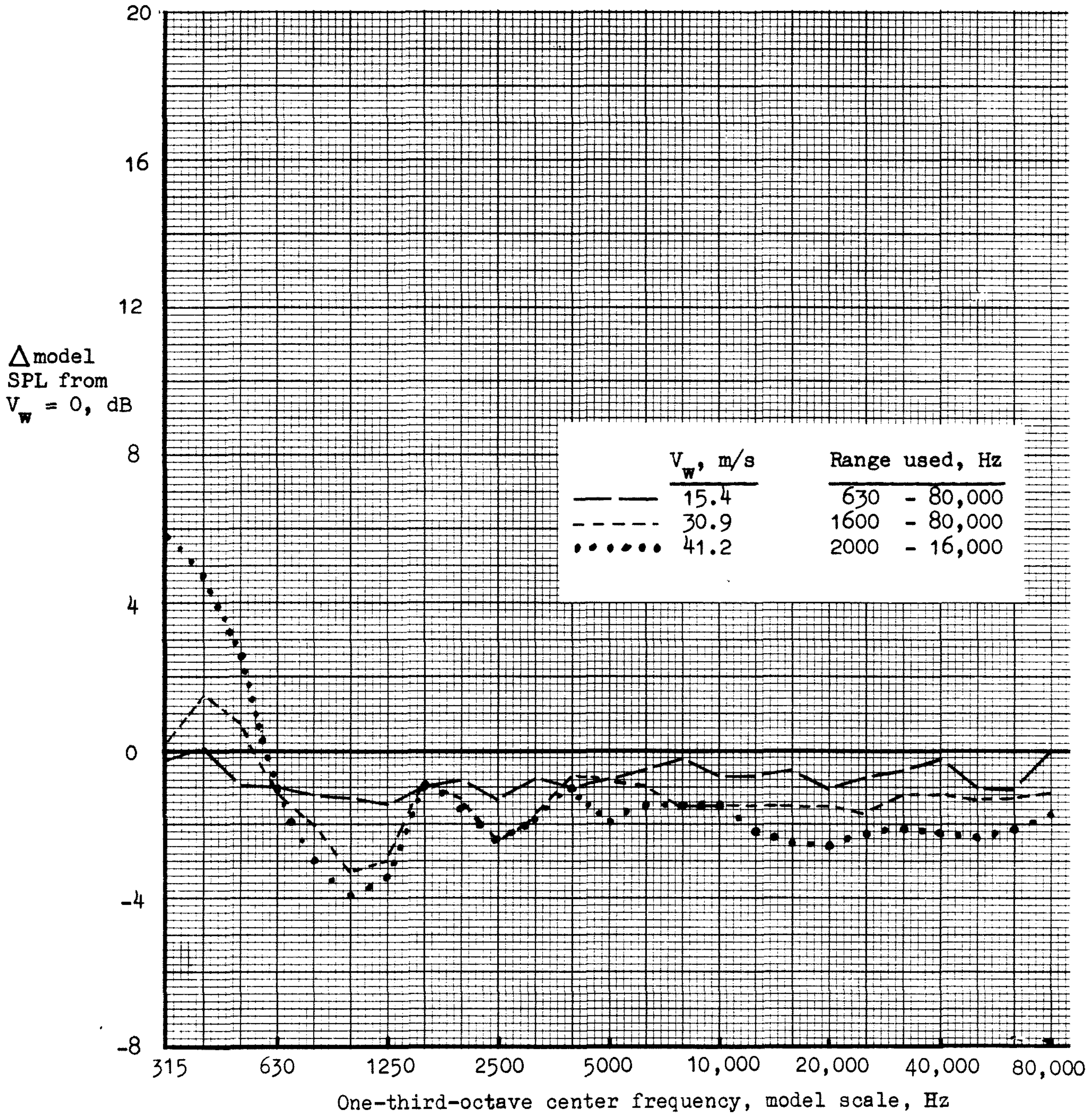
(b) Microphone 3.

Figure 9-2 .- Continued.



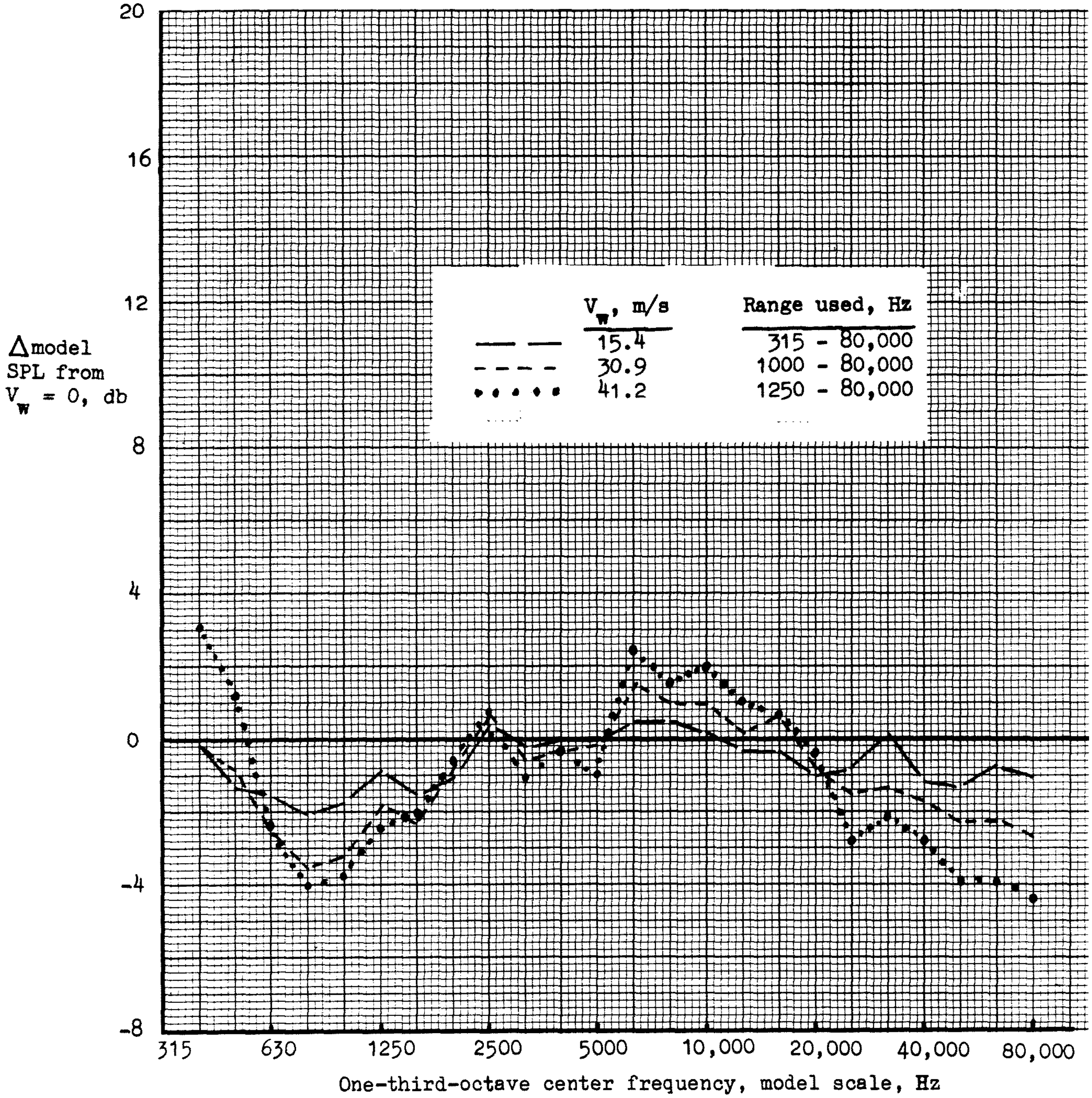
(c) Microphone 4.

Figure 9-2.- Continued.



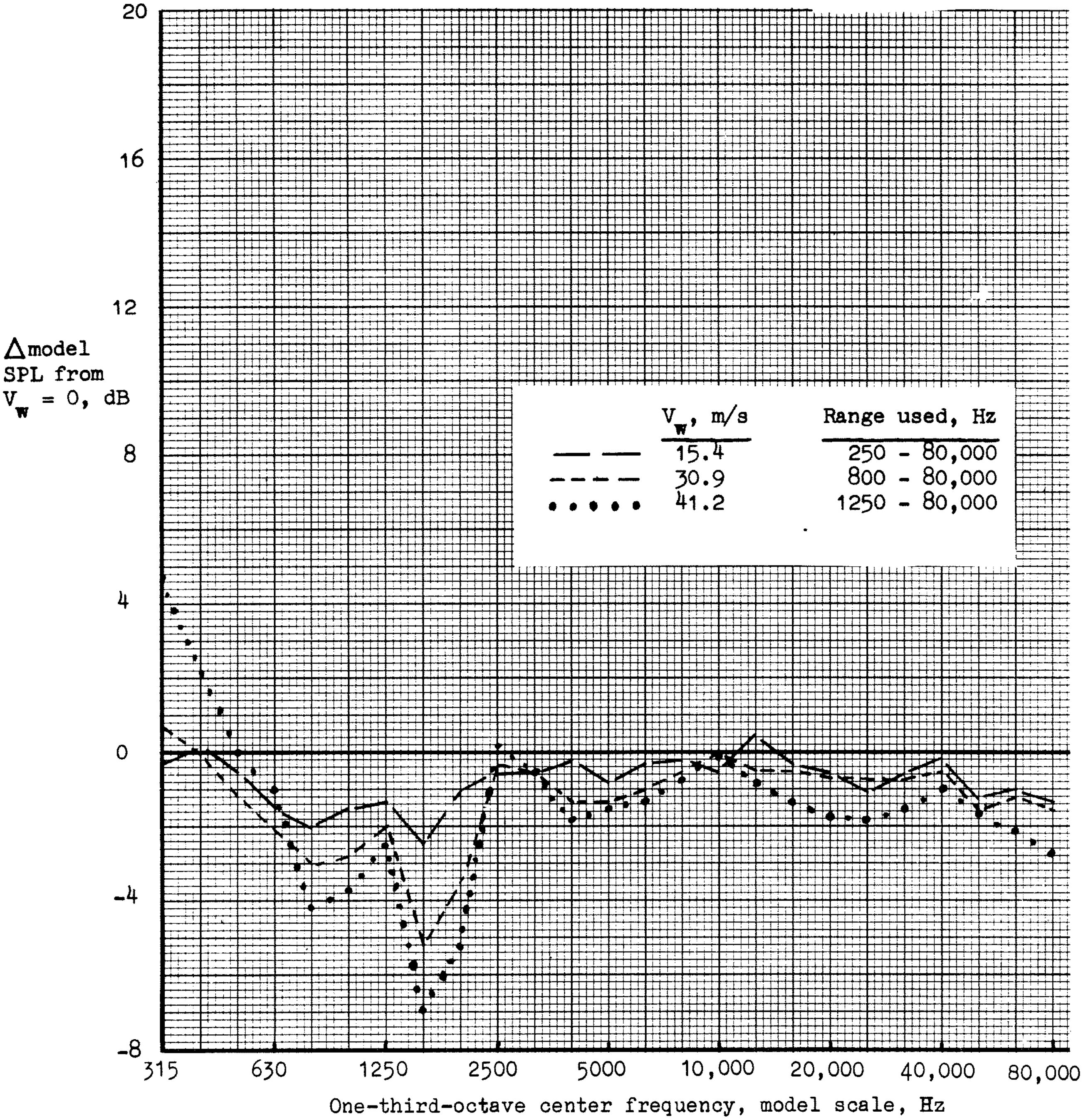
(d) Microphone 6.

Figure 9-2.- Continued.



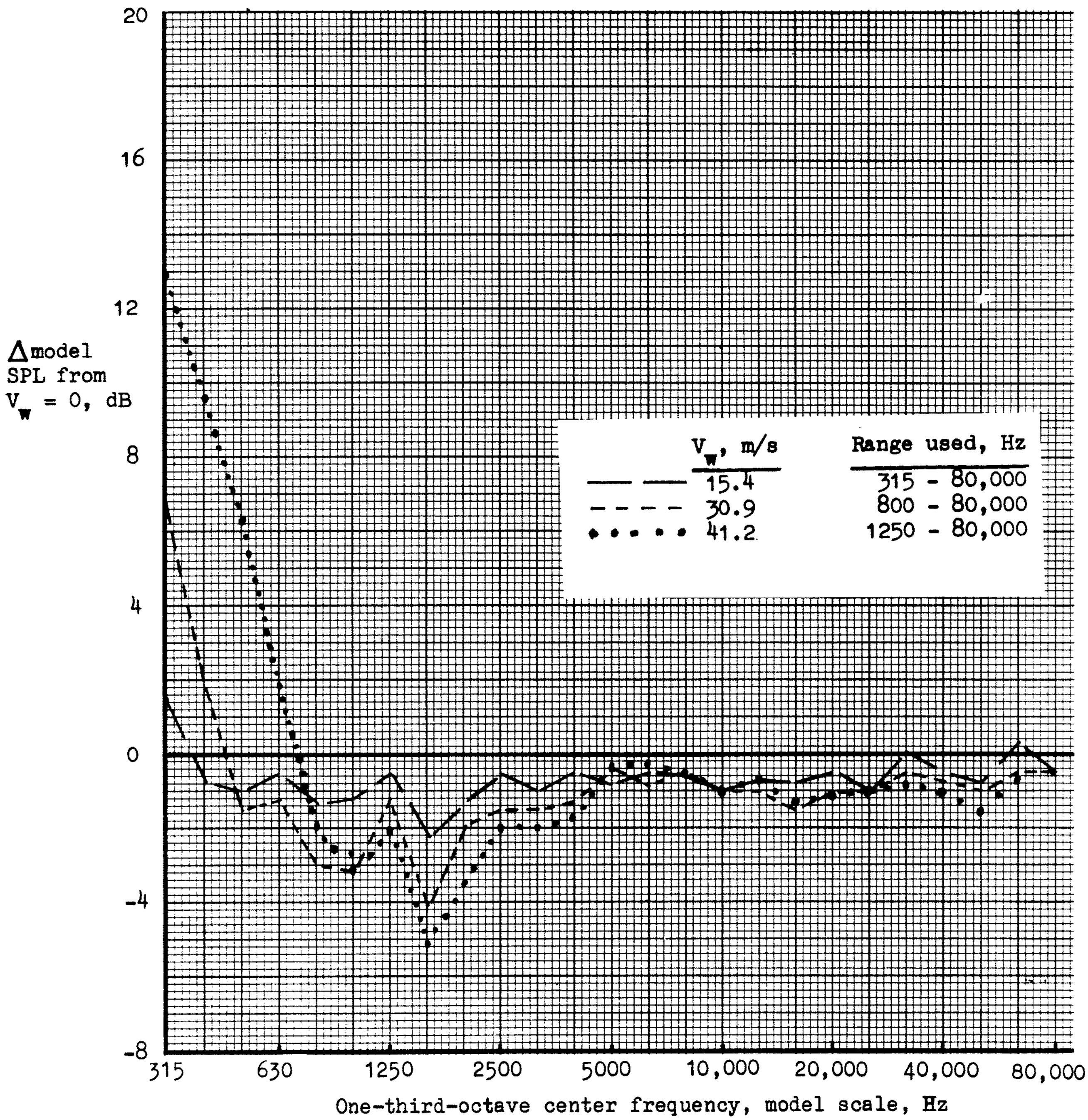
(e) Microphone 7.

Figure 9-2.- Continued.



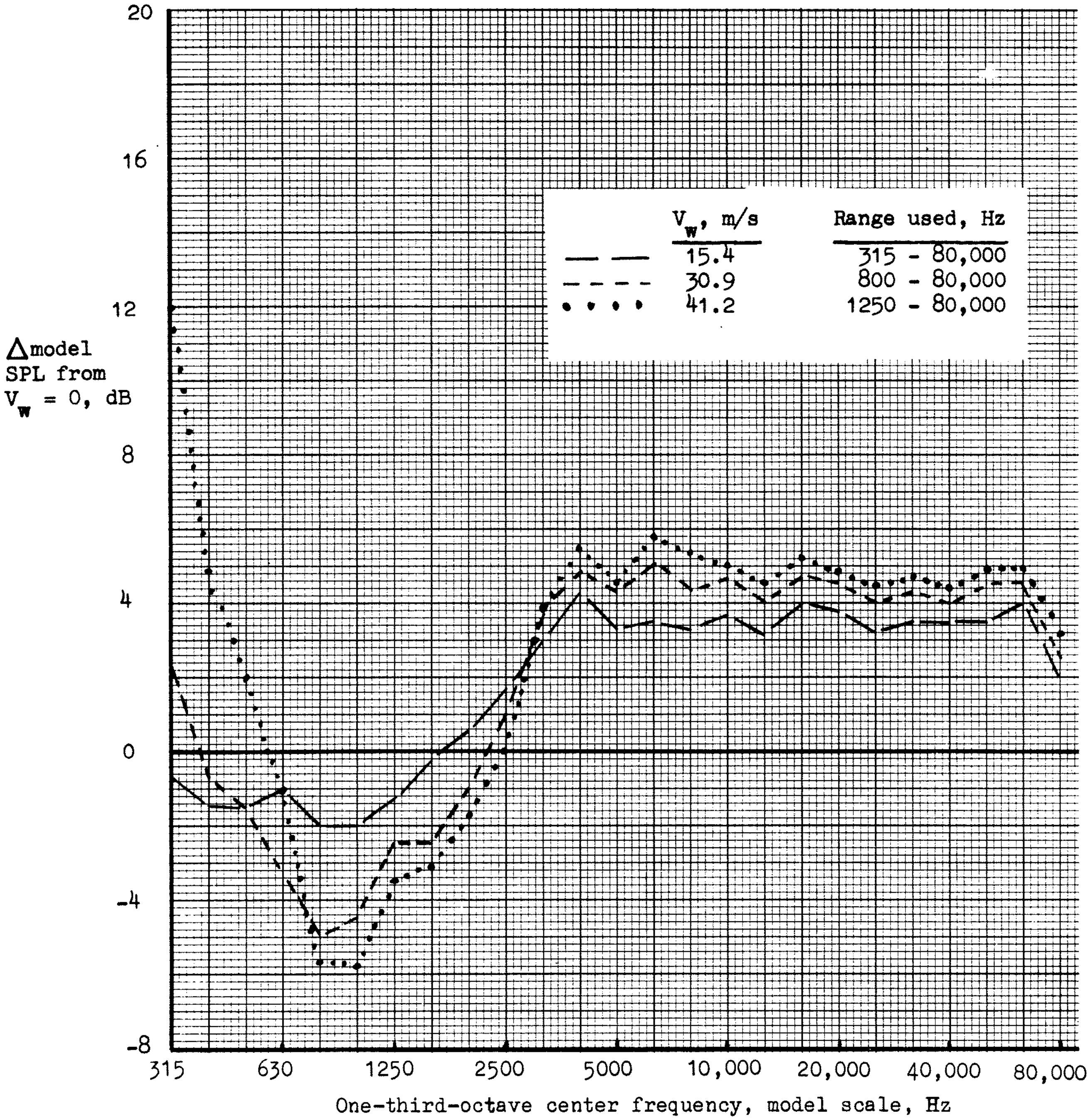
(f) Microphone 8.

Figure 9-2.- Continued.



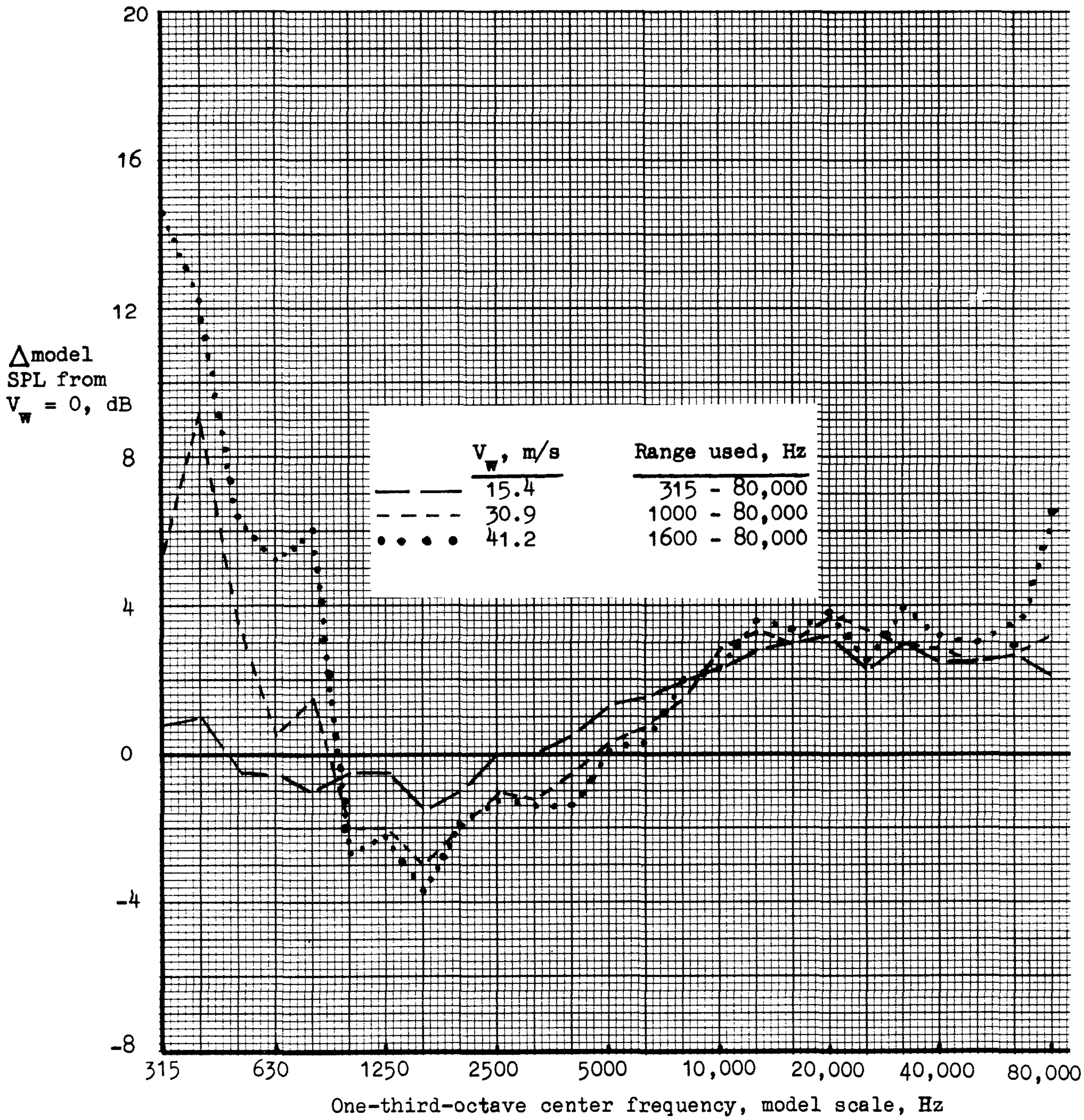
(g) Microphone 9.

Figure 9-2.- Continued.



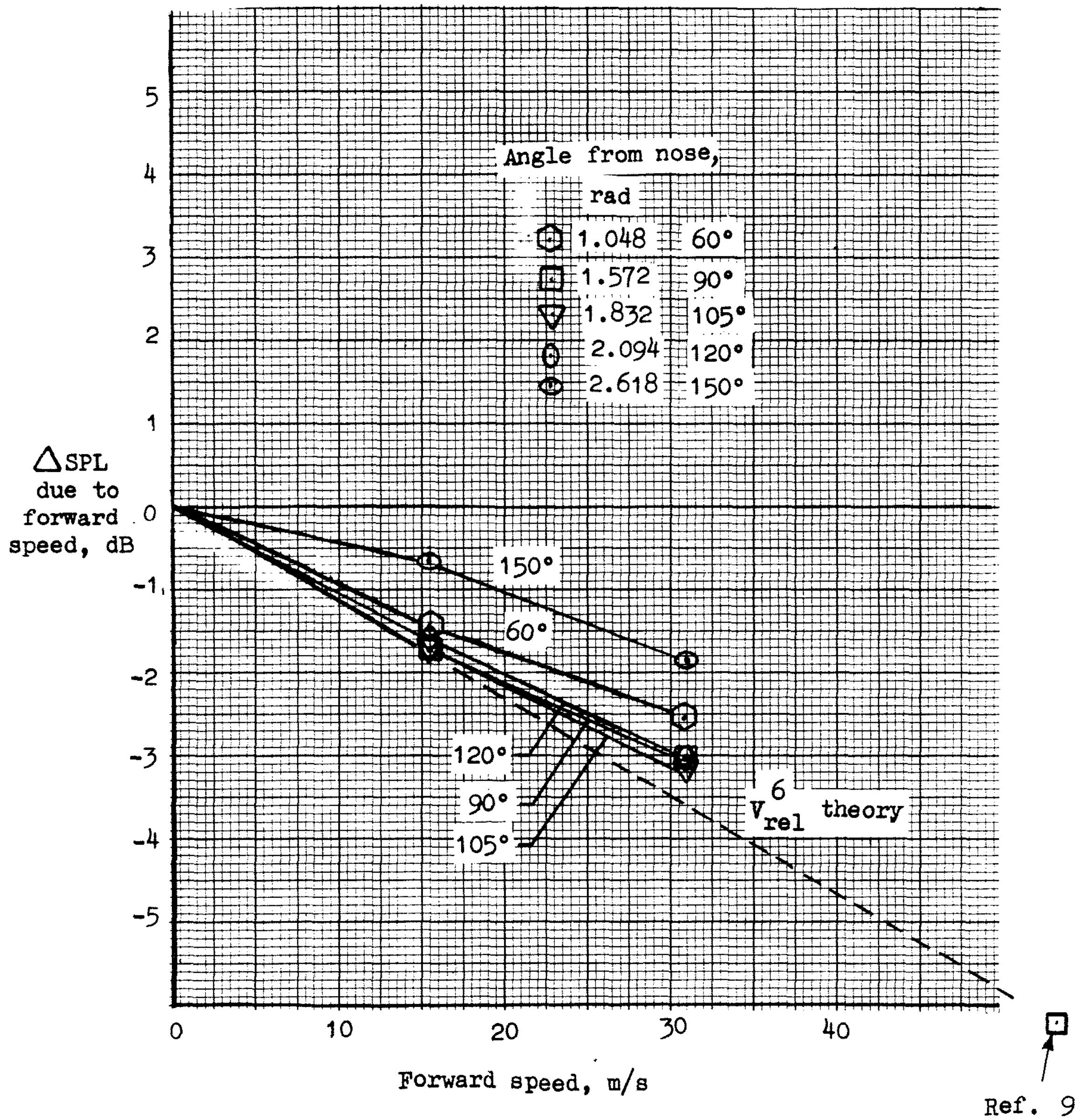
(h) Microphone 11.

Figure 9-2.- Continued.



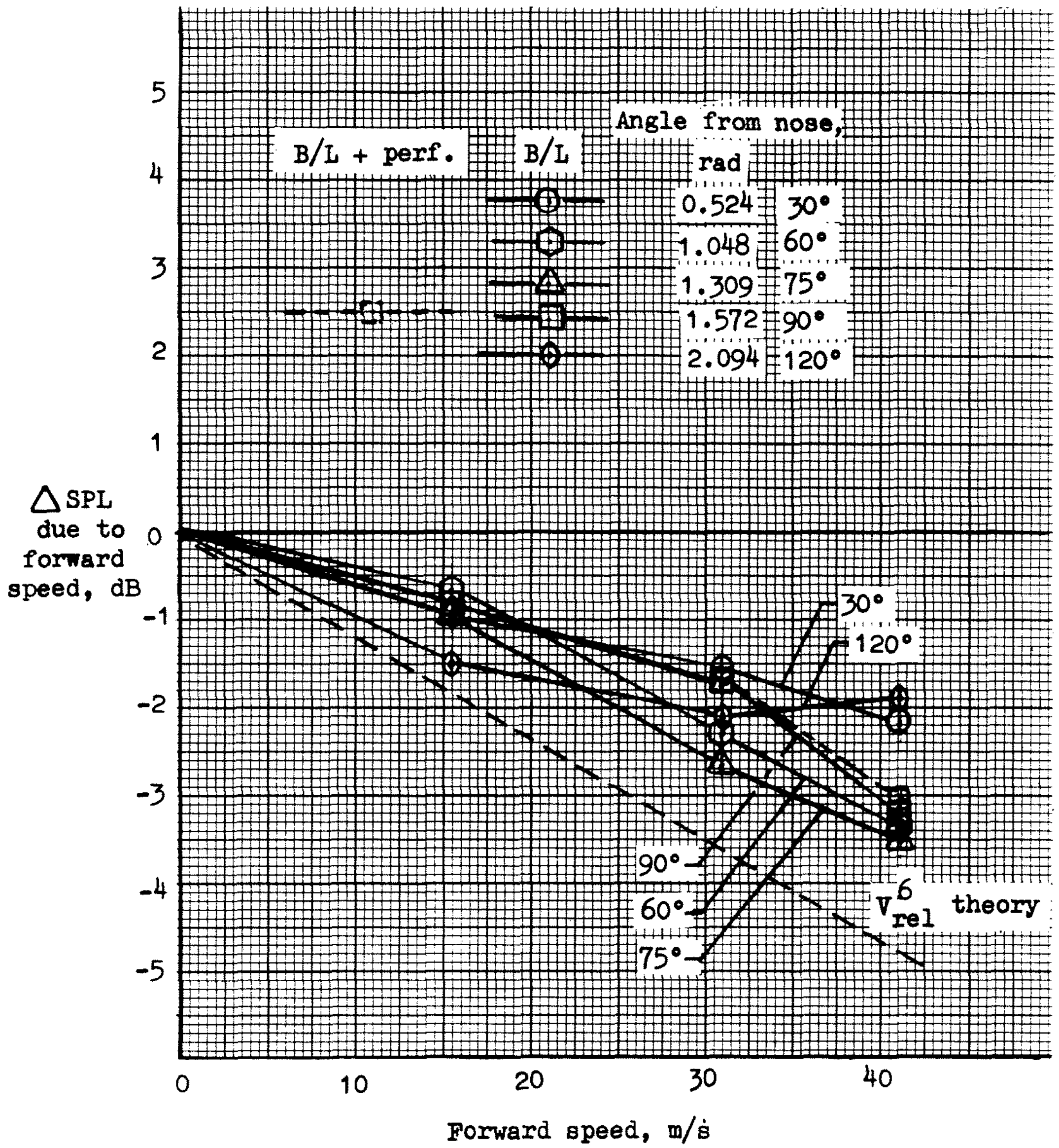
(i) Microphone 12.

Figure 9- 2 .- Concluded.



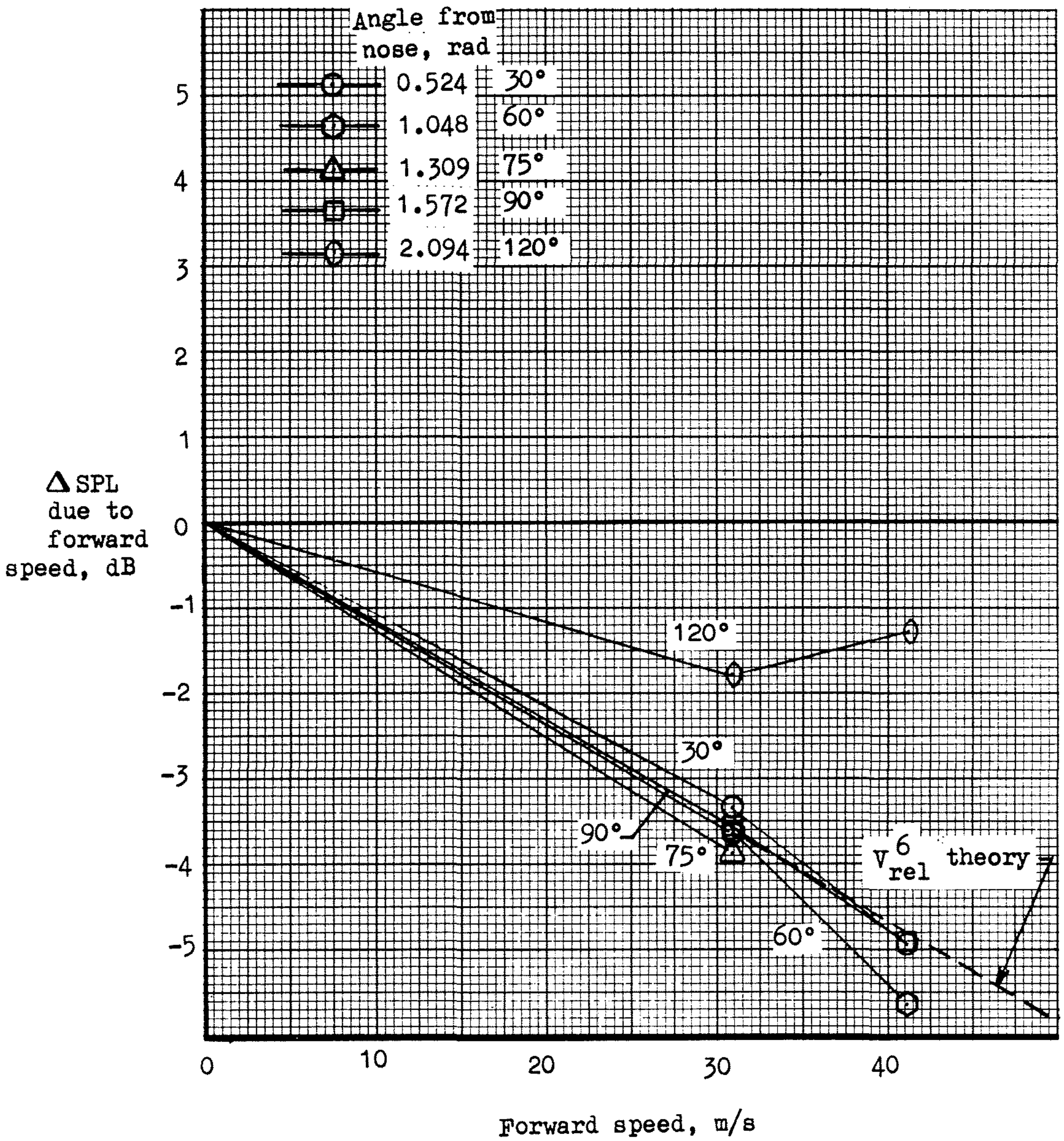
(a) Jet alone.

Figure 9-3. - Effect of forward speed on SPL. $V_j = 245$ m/s.



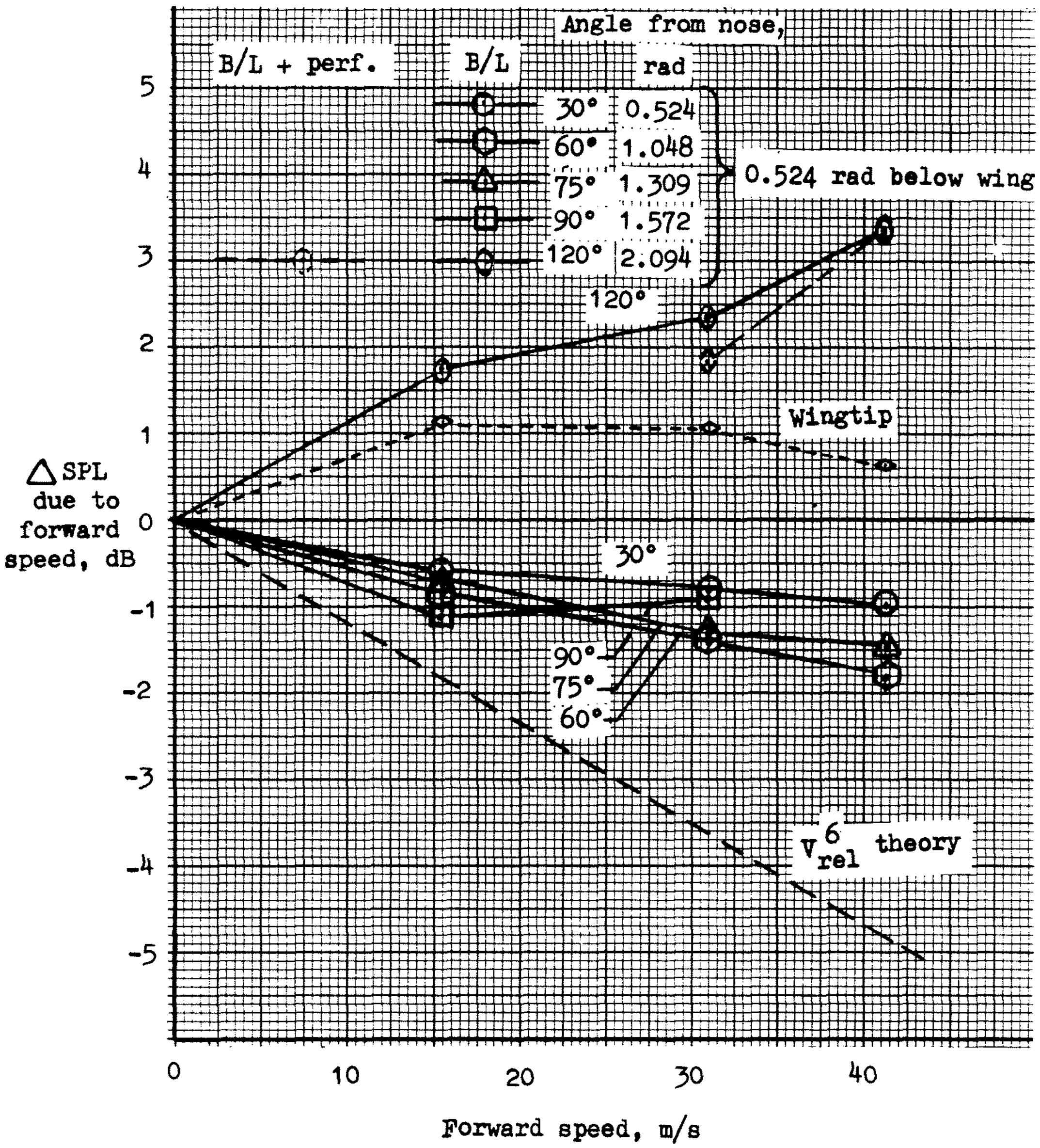
(b) Jet and wing/flap, takeoff setting, baseline configuration. Flyover.

Figure 9-3. -Continued.



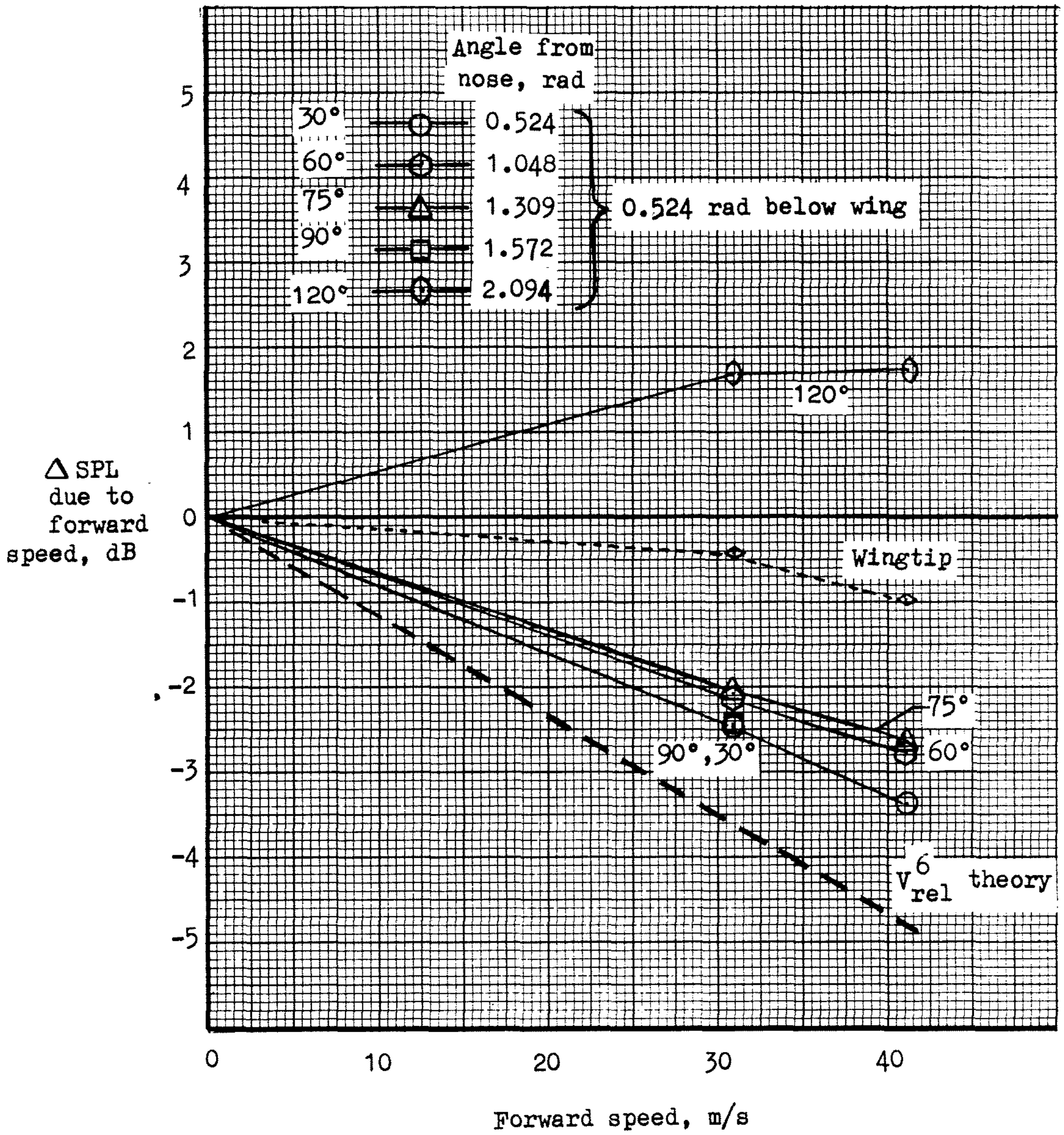
(c) Jet and wing/flap, takeoff flap setting, single-slotted flap configuration. Flyover.

Figure 9-3. -Continued.



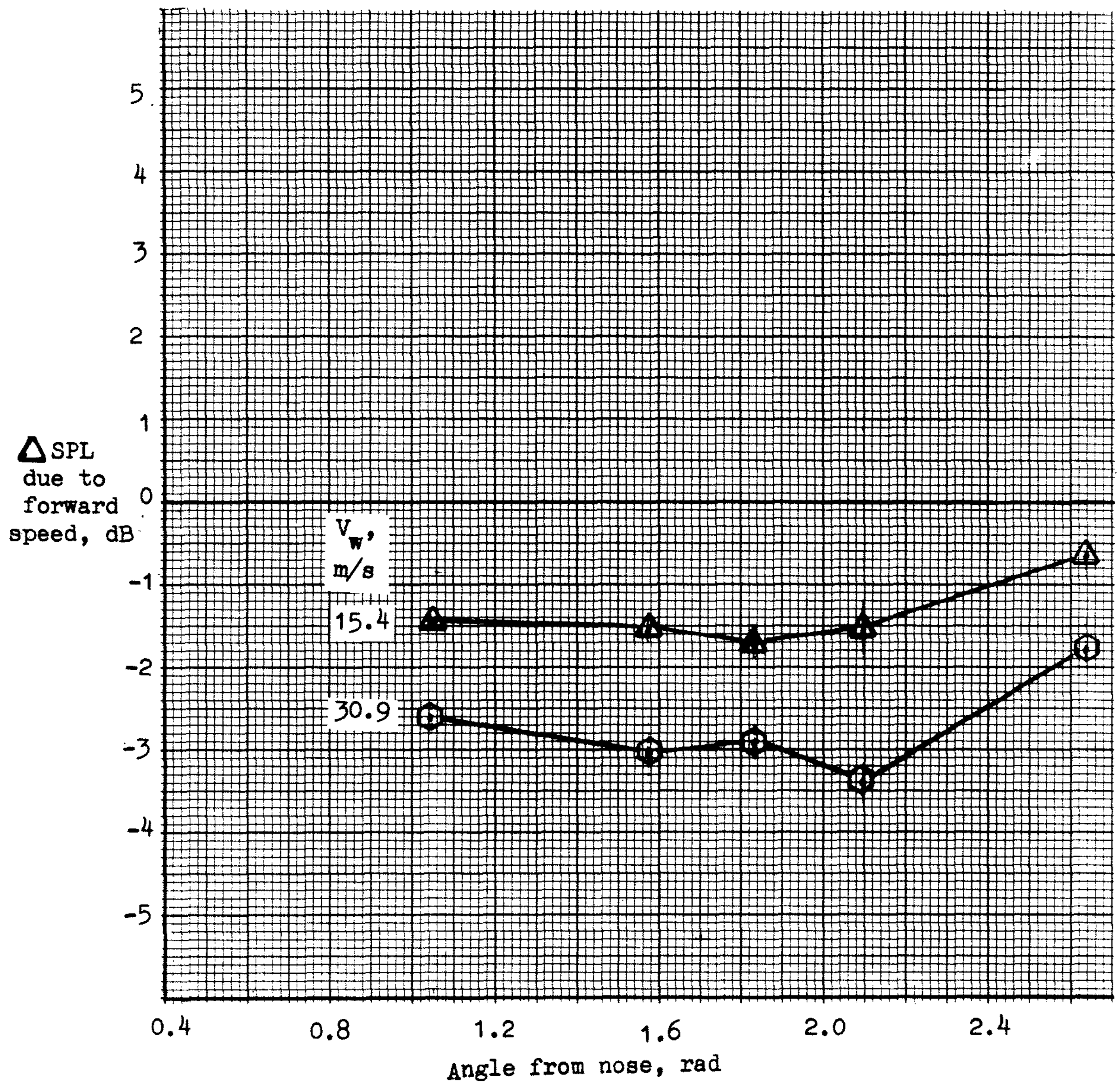
(d) Jet and wing/flap, takeoff flap setting, baseline configuration. 0.524 rad below wing, and wingtip.

Figure 9-3. -Continued.



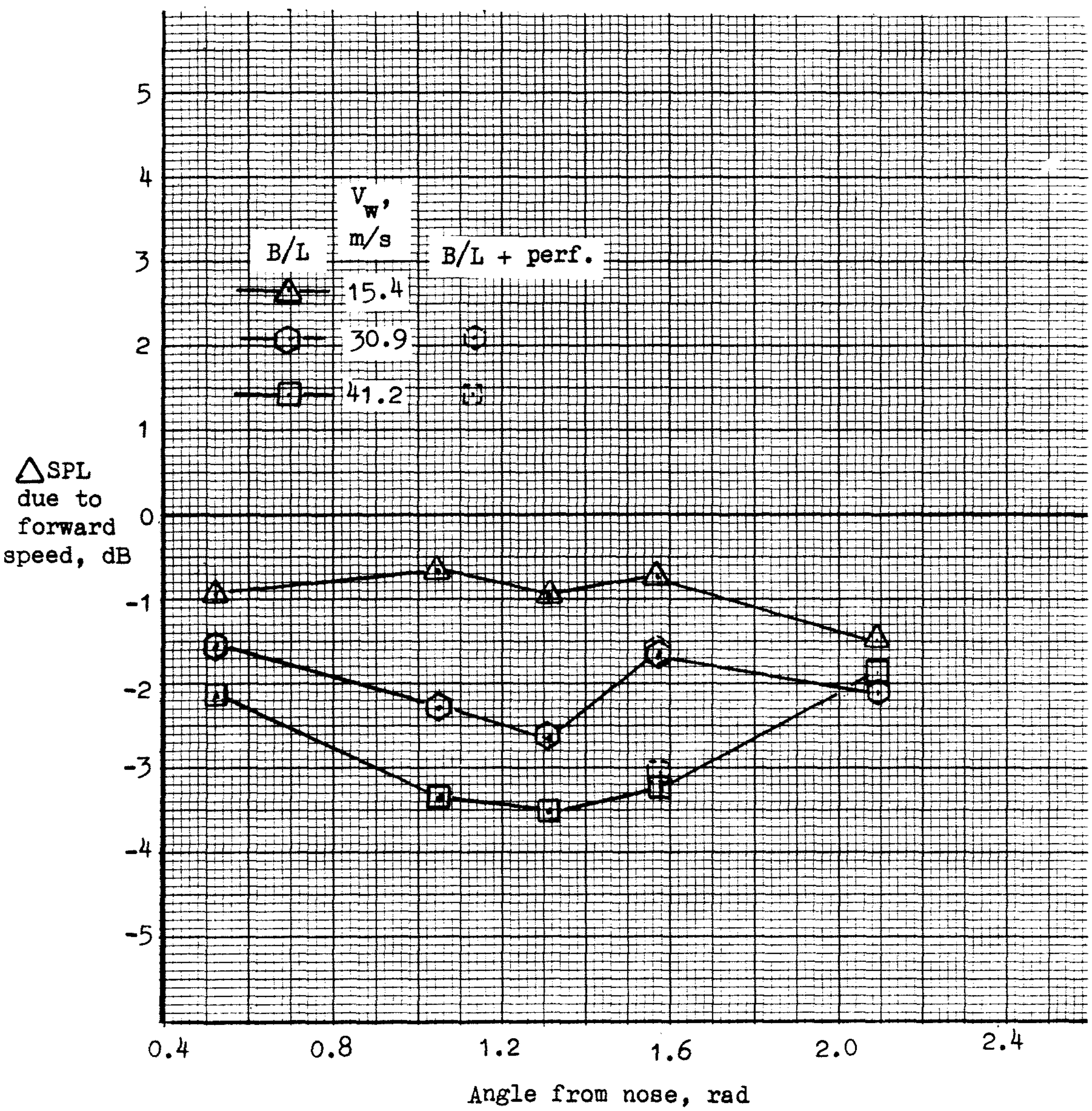
(e) Jet and wing/flap, takeoff flap setting, single-slotted flap configuration. 0.524 rad below wing, and wingtip.

Figure 9-3. -Concluded.



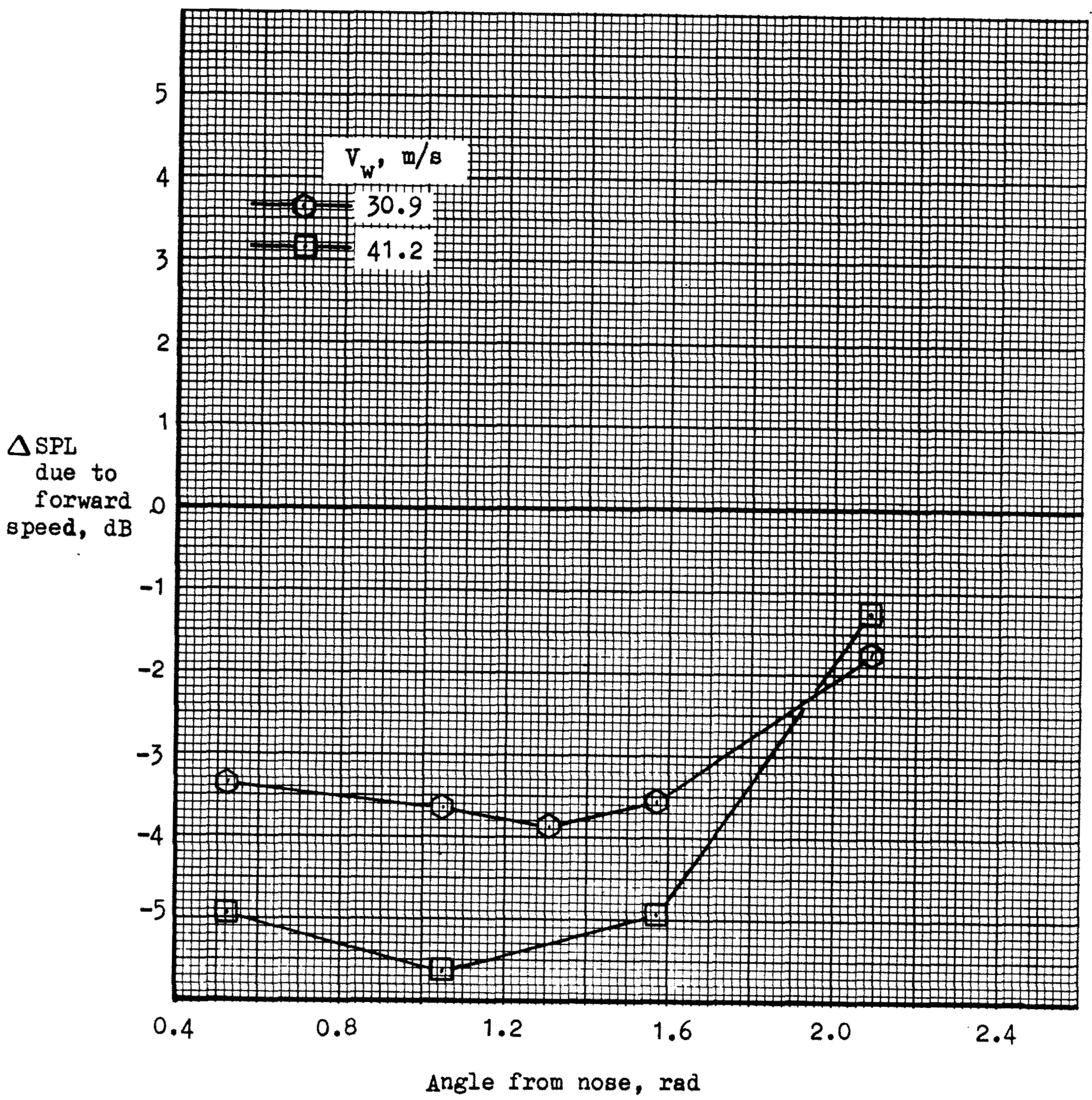
(a) Jet alone.

Figure 9-4. - Directivity of forward speed effects. V_j = 245 m/s.



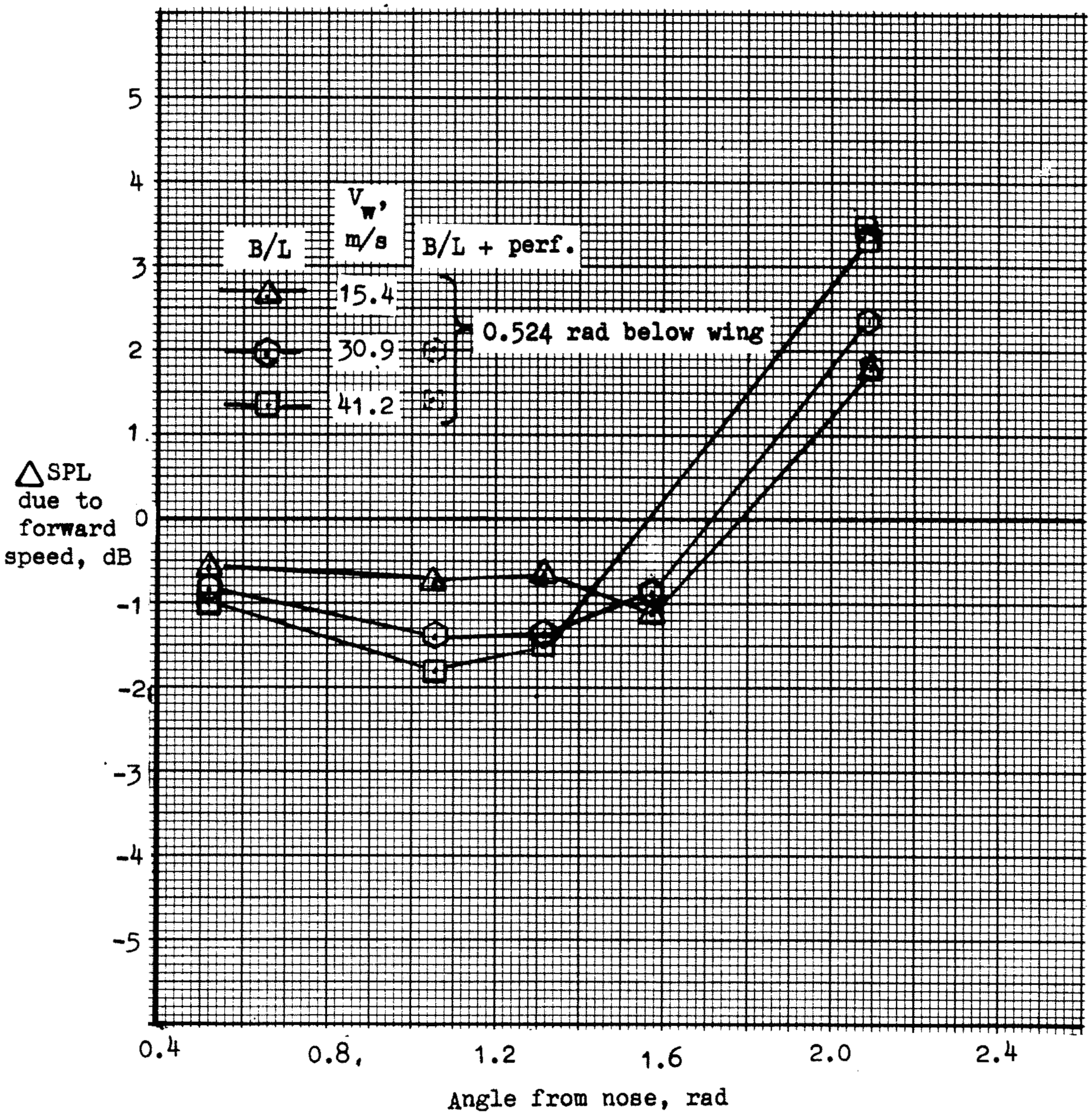
(b) Jet and wing/flap, takeoff flap setting, baseline configuration. Flyover.

Figure 9-4.-Continued.



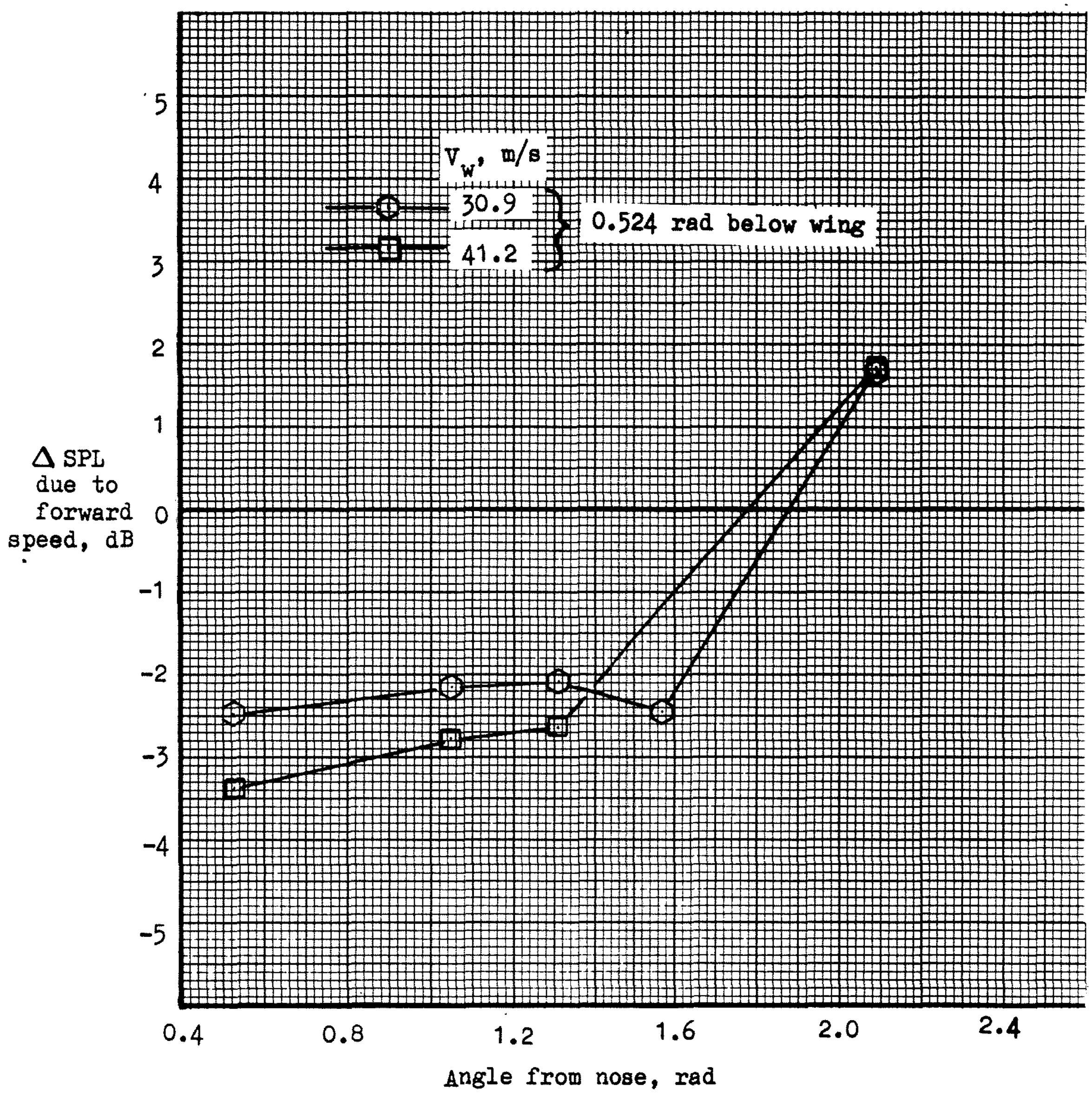
(c) Jet and wing/flap, takeoff flap setting, single-slotted flap configuration. Flyover.

Figure 9-4. -Continued.



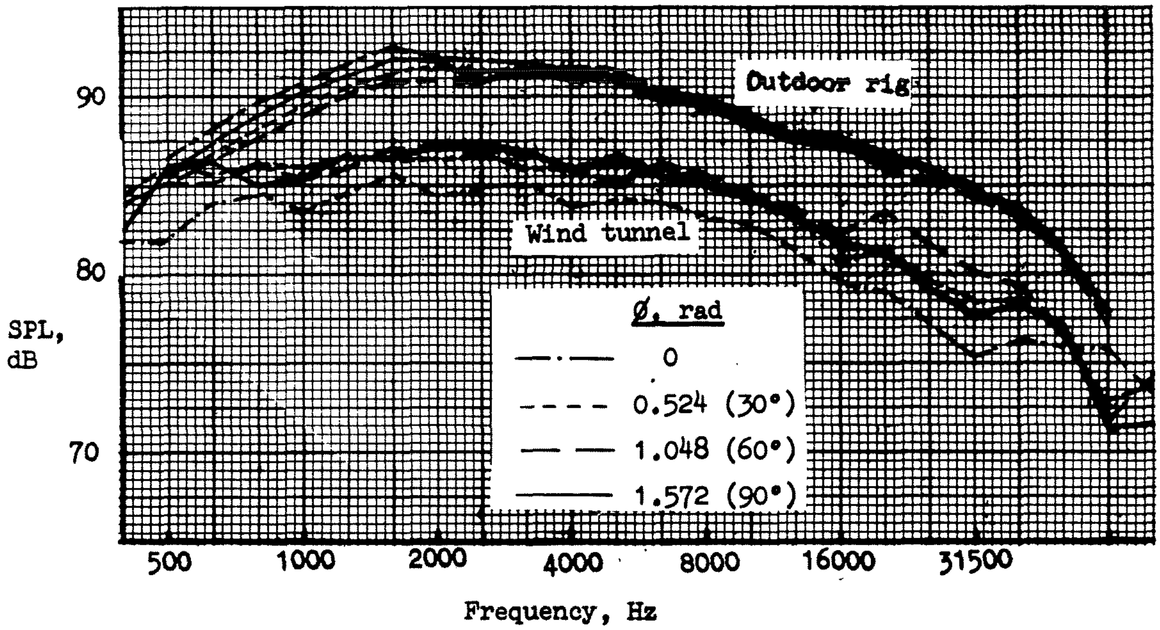
(d) Jet and wing/flap, takeoff flap setting, baseline configuration. 0.524 rad below wing

Figure 9-4.-Continued.

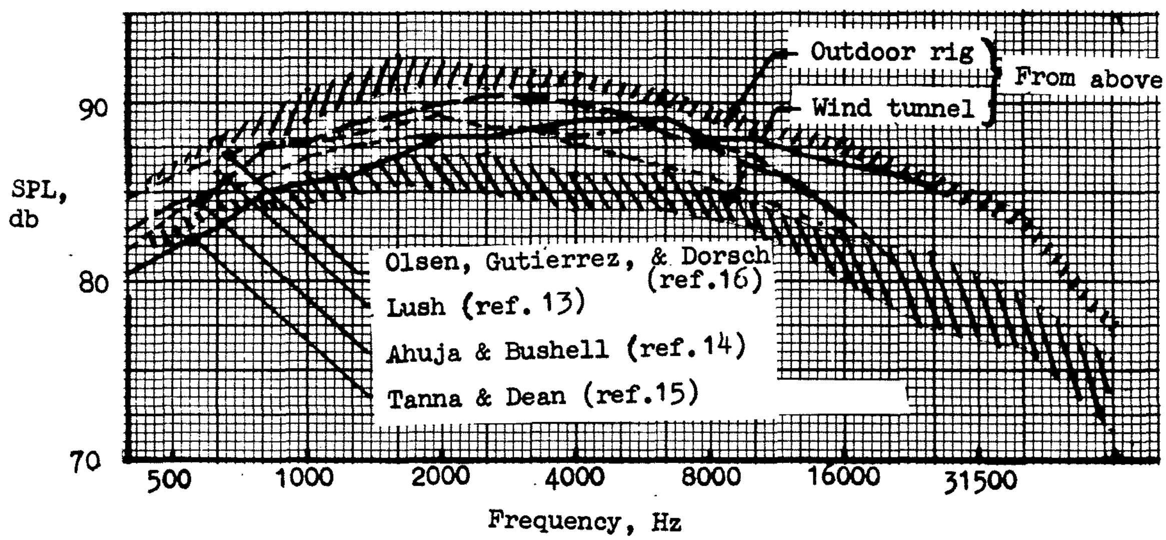


(e) Jet and wing/flap, takeoff flap setting, single-slotted flap configuration. 0.524 rad below wing

Figure 9-4.-Concluded.

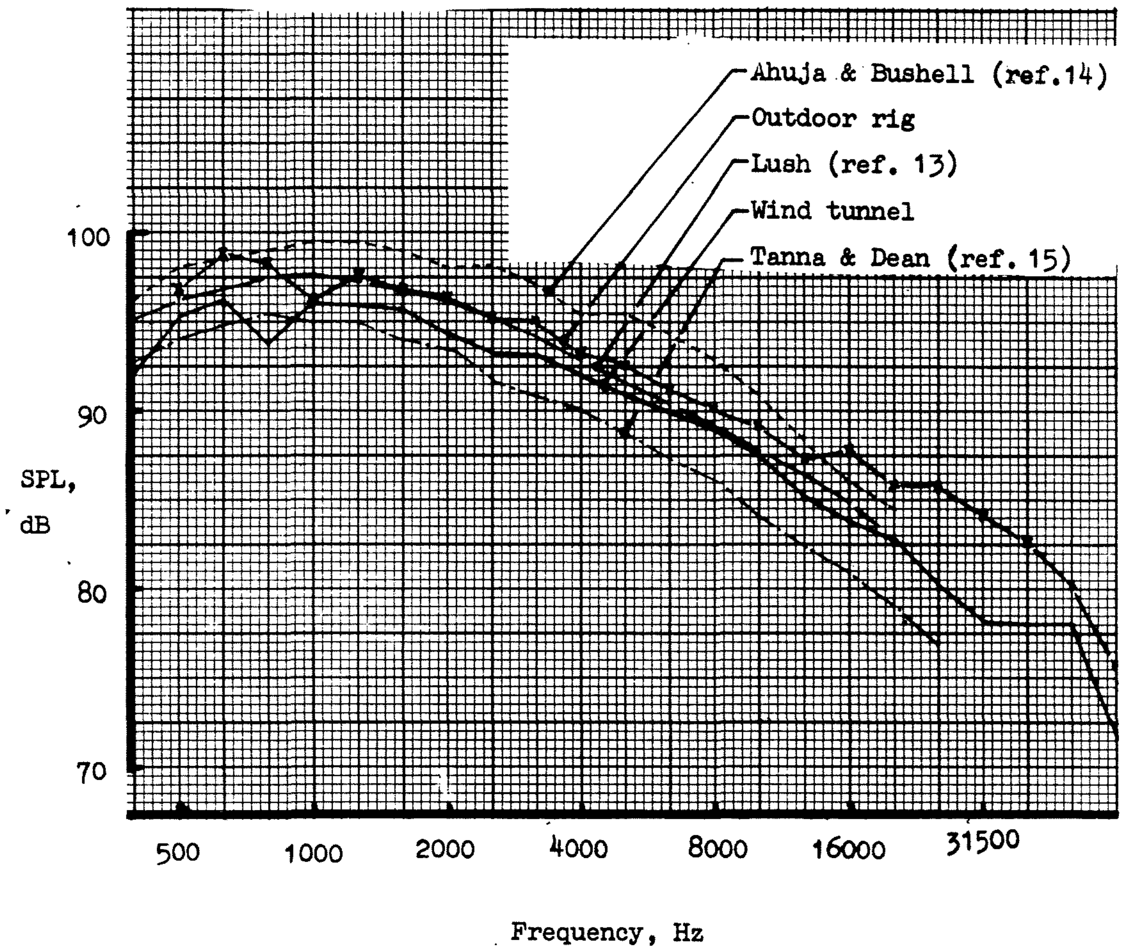


(a) Data from wind tunnel and outdoor rig. 1.572 rad (90°) aft of nose.



(b) Data from references and present program. 1.572 rad (90°) aft of nose.

Figure 9-5.- Jet-alone spectra, static, normalized to wind tunnel conditions (V_j = 245 m/s, D = 8.64 cm, R = 2.44 m, anechoic).



(c) Data from references and present program. 2.618 rad (150°) aft of nose.

Figure 9-5.- Concluded.

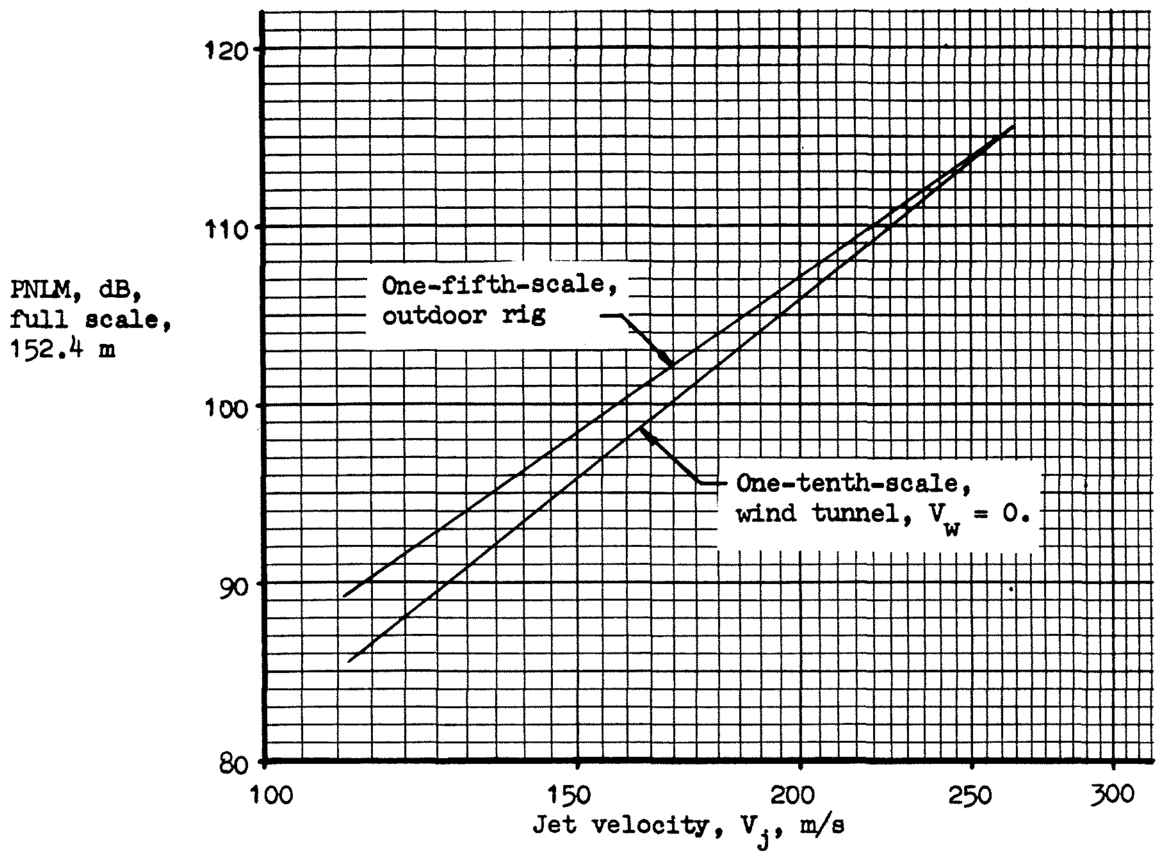


Figure 9-6. Comparison of noise characteristics, wind tunnel and outdoor rig, normalized to anechoic wind tunnel conditions. Baseline B, takeoff flap setting, flyover.

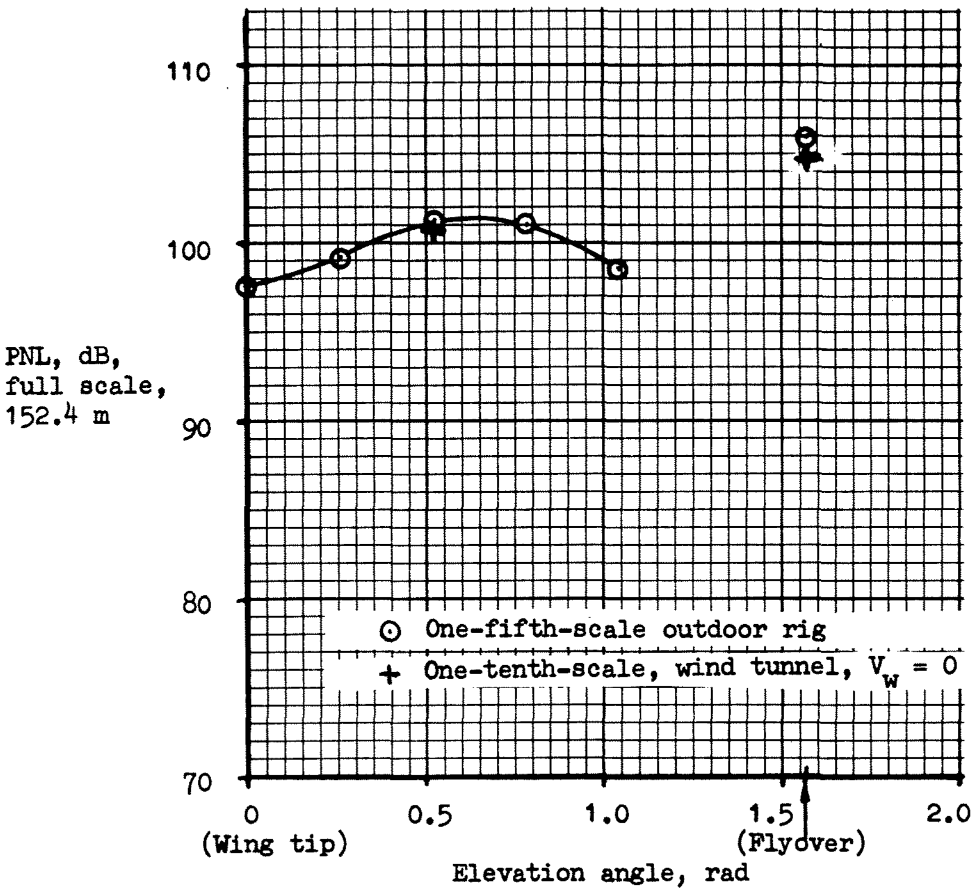


Figure 9-7.- Circumferential directivities, 1.572 rad (90°) aft of nose, normalized to anechoic wind tunnel conditions. Baseline B, takeoff flap setting, V_j = 195 m/s.

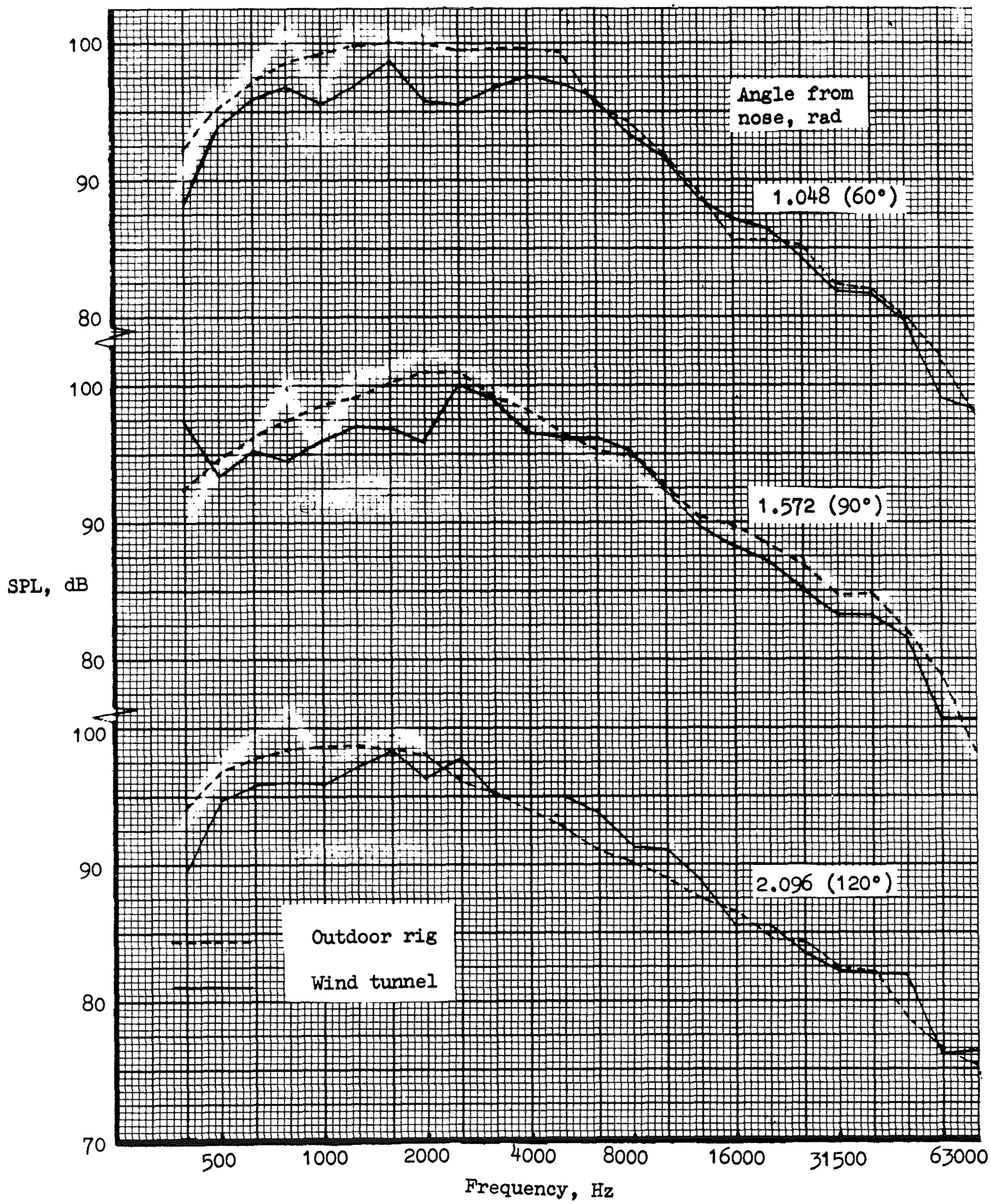


Figure 9-8. Wind tunnel and outdoor rig spectra, normalized to anechoic wind tunnel conditions. Baseline B, takeoff flap setting, flyover, V_j = 195 m/s.

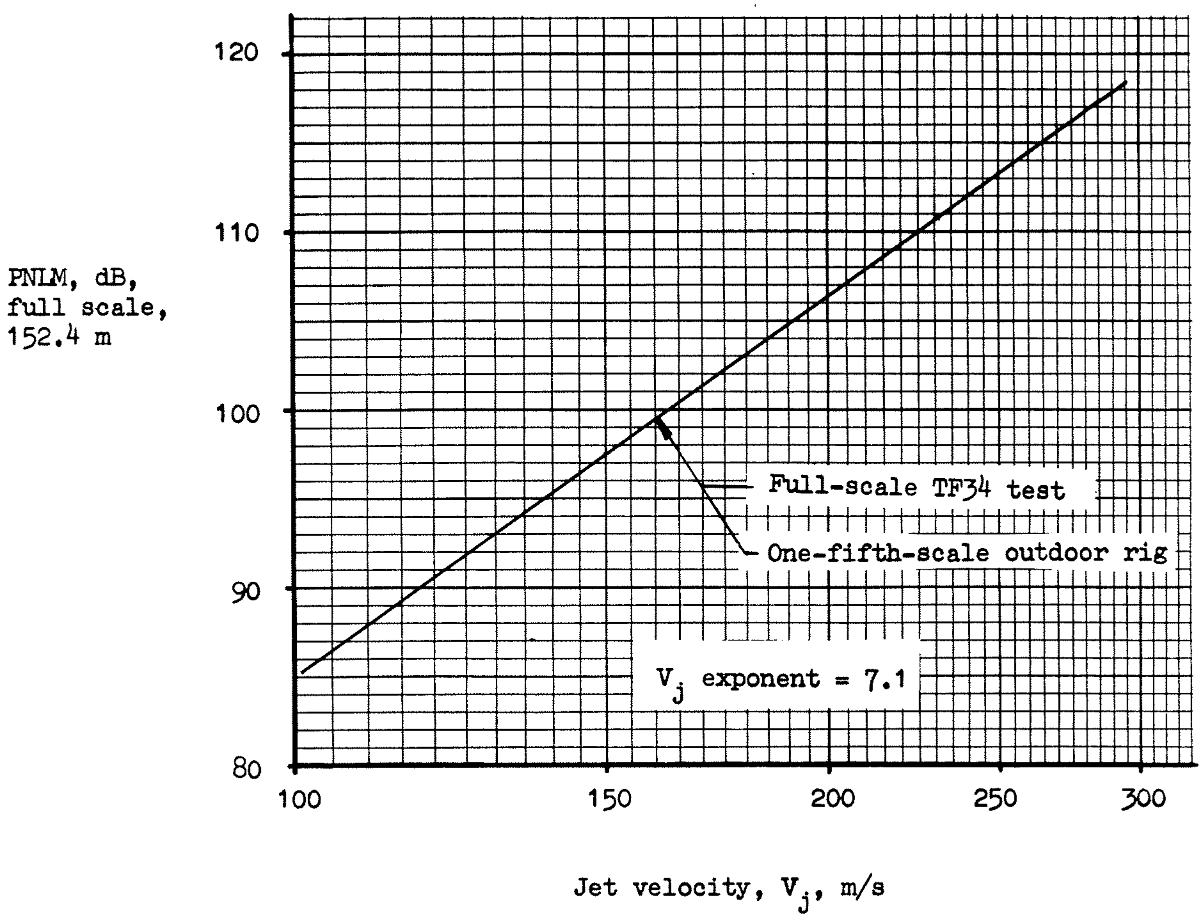


Figure 9-9. - Comparison of noise characteristics, outdoor rig and full-scale TF34 test, normalized to full-scale, four engines, hot-flow conditions. Baseline A, takeoff flap setting, flyover.

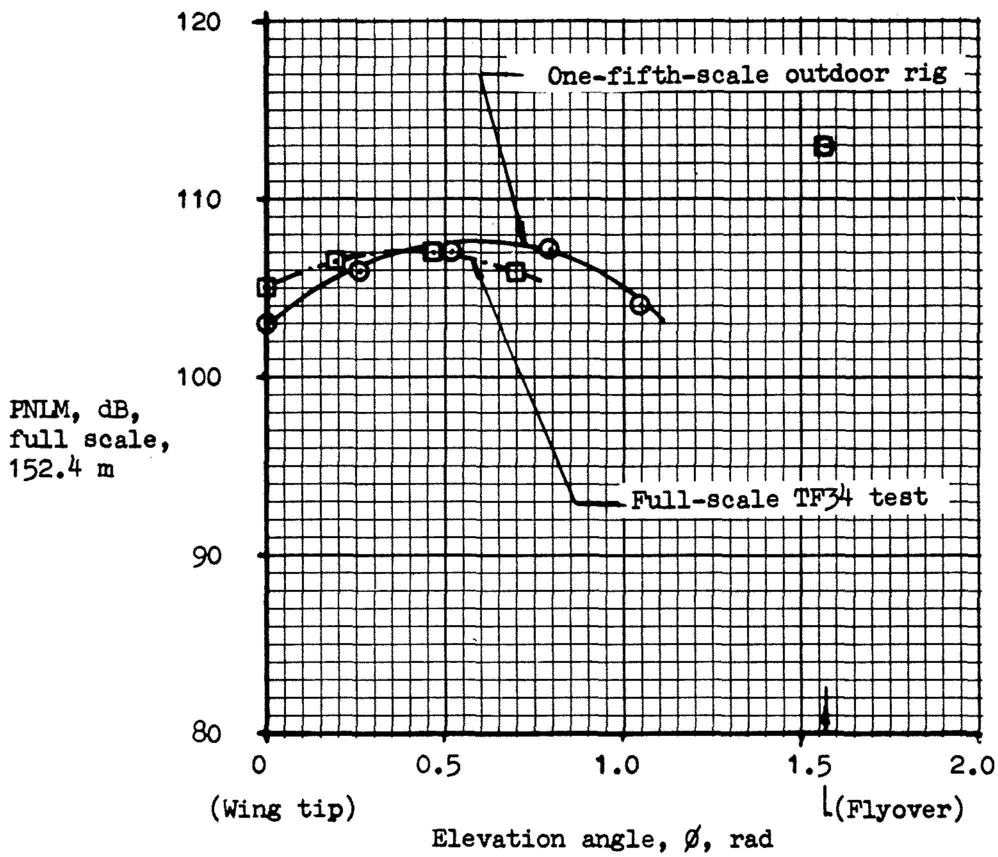


Figure 9-10.- Circumferential directivities, 1.572 rad (90°) aft of nose, normalized to full-scale hot-flow conditions. Baseline A, takeoff flap setting, V_j = 245 m/s.

TABLE 9-I

NOISE INCREMENTS AT 41.2 M/S (80 KN), dB

More slot exit flap interaction noise, which increases with forward speed; less noise reduction

Follows jet-alone pattern; less noise reduction at forward angles

	Single-slotted flaps			Triple-slotted flaps		
Elevation angle, rad	1.572 (90°)	0.524 (30°)	0 (0°)	1.572 (90°)	0.524 (30°)	0 (0°)
Angle from nose, rad						
0.524 (30°)	-4.9	-3.4		-2.2	-1.0	
1.048 (60°)	-5.6	-2.8		-3.4	-1.8	
1.309 (75°)	-5.1	-2.6		-3.5	-1.4	
1.572 (90°)	-4.9	-3.3	-1.0	-3.2	-1.0	+0.6
2.096 (120°)	-1.3	+1.7		-1.9	+3.4	

Shielded from most jet noise, which decreases with forward speed; partly exposed to slot exit flap interaction noise, which increases with forward speed; noise reductions small or negative

Less direct view of jet sheet noi which decreases with forward spee less noise reduction

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10. WIND TUNNEL AERO/PROPULSION RESULTS

Forward Speed Results

The effects of trailing edge sweep angle, third flap treatment, and number of slots on wing/flap performance are discussed below in terms of the three parameters most significant to takeoff and landing performance: C_X during takeoff ground roll, C_L during climbout, and C_L during approach. The first two, converted to takeoff field length sensitivity factors, are used in the noise-performance tradeoffs in the next section, Application to Aircraft. The effect of configuration on approach C_L is discussed below; no landing distance sensitivity factor is used, however, since landing is not critical in determining the required field length of the reference aircraft and its modifications.

Explanation of performance increments. Figure 10-1 indicates schematically how the performance maps, figures 10-2 through 10-7, are used. The effect of a configuration change on C_X during ground roll is simply the C_X increment at $\alpha = 0$ and a constant C_T of 1.4. The effect on climb C_L is the C_L increment at a constant C_T of 1.4 as before, along a climb gradient going through the C_L and C_X of the baseline at $C_T = 1.4$ and $\alpha = 0.14$ rad (8°). (Climb gradient is equal to C_X/C_L and thus to the slope of a line on a C_L vs C_X map. Glide slope has a similar graphical interpretation.) The effect of configuration on approach C_L is the C_L increment on the landing-flap map at a C_T of 1.4, along a glide slope again defined by $C_T = 1.4$ and $\alpha = 0.14$ rad.

An angle of attack of 0.14 rad (8°) was used in these comparisons and in deriving field length sensitivity factors because, due to air supply interference limitations beneath the wind tunnel floor, it was the highest α tested; the actual angle of attack of the reference aircraft is 0.17 rad (10°) during climbout and 0.19 rad (11°) during approach. The selected C_T of 1.4 is close to the C_T of the reference aircraft both during climb ($C_T = 1.44$ at 43.8 m/s (85 knots)) and during approach ($C_T = 1.29$ at 38.6 m/s (75 knots)). These α and C_T differences

are believed to have only a minor effect on the comparisons discussed below and on the sensitivity factor and field length calculations.

Configuration effects. The performance data for the various configurations at forward speed are summarized in figures 10-2 through 10-7. Figure 10-2 shows the performance of the baseline configuration, which has triple-slotted flaps, no trailing-edge sweep, and no treatment. The levels and trends of the data agree with wind tunnel data for similar configurations from references 19 and 20.

Figure 10-3 shows the effect of wing sweep. The dashed lines are baseline curves transcribed from the previous figure. Sweeping the wing trailing edge from 0 to 0.262 rad (15°) has no effect on C_X during the takeoff run but reduces C_L during climb and approach by approximately 4 and 3% respectively.

Figures 10-4 and 10-5 compare the single-slotted flap with the triple-slotted flap for wing sweeps of 0 and 0.262 rad (15°). In both cases the C_X of the single-slotted flap is higher during the ground run by approximately 10%. During climb there is a 2% improvement in C_L for the single-slotted flap with the swept wing and no effect for the unswept wing. During approach, C_L falls off for the single-slotted flap by approximately 6%. This is a moderate decrease, indicating that even with a single slot and a large flap deflection the flow remains fairly well attached over the upper surface. A similar result is seen in figure 31 of reference 21.

The effect of adding a perforated third flap is shown at the takeoff flap setting in figure 10-6. For the triple-slotted flap with zero sweep, there is a 3% penalty to C_X and a 5% penalty to C_L for adding treatment on the third flap; with 0.262 rad sweep there is a 3% improvement in C_X and a 4% penalty to C_L. For the single-slotted flap with 0.262 rad sweep, treatment causes a 3% reduction in C_X and a 2% reduction in C_L. The swept and treated configuration was not tested at takeoff. The penalties are probably due to viscous losses associated with the treatment. The lone improvement is unexplained.

The effects of treatment with landing flaps are shown in figure 10-7. The C_L penalties for the triple-slotted flap are 3-5%, with no penalty to C_L for the single-slotted flap. The triple-slotted flap penalty may be due to the treatment causing flow separation on the upper surface of the trailing edge. The single-slotted flap flow is apparently separated both with and without the treatment, yielding the same performance for both.

Static Turning Efficiency and Angle

Figure 10-8 shows turning efficiency and turning angle measured statically in the wind tunnel. The results agree well with test results from the static rig, as was discussed in section 8, Static Test Aero/Propulsion Results. Treatment causes a larger reduction in both η_T and δ_{FV} than is seen in the static tests, presumably due to the relatively larger treated area. The effect of single-slotted flaps versus triple-slotted flaps is similar to the effect seen in the static rig tests. Sweep was found to have no effect on η_T and δ_{FV}.

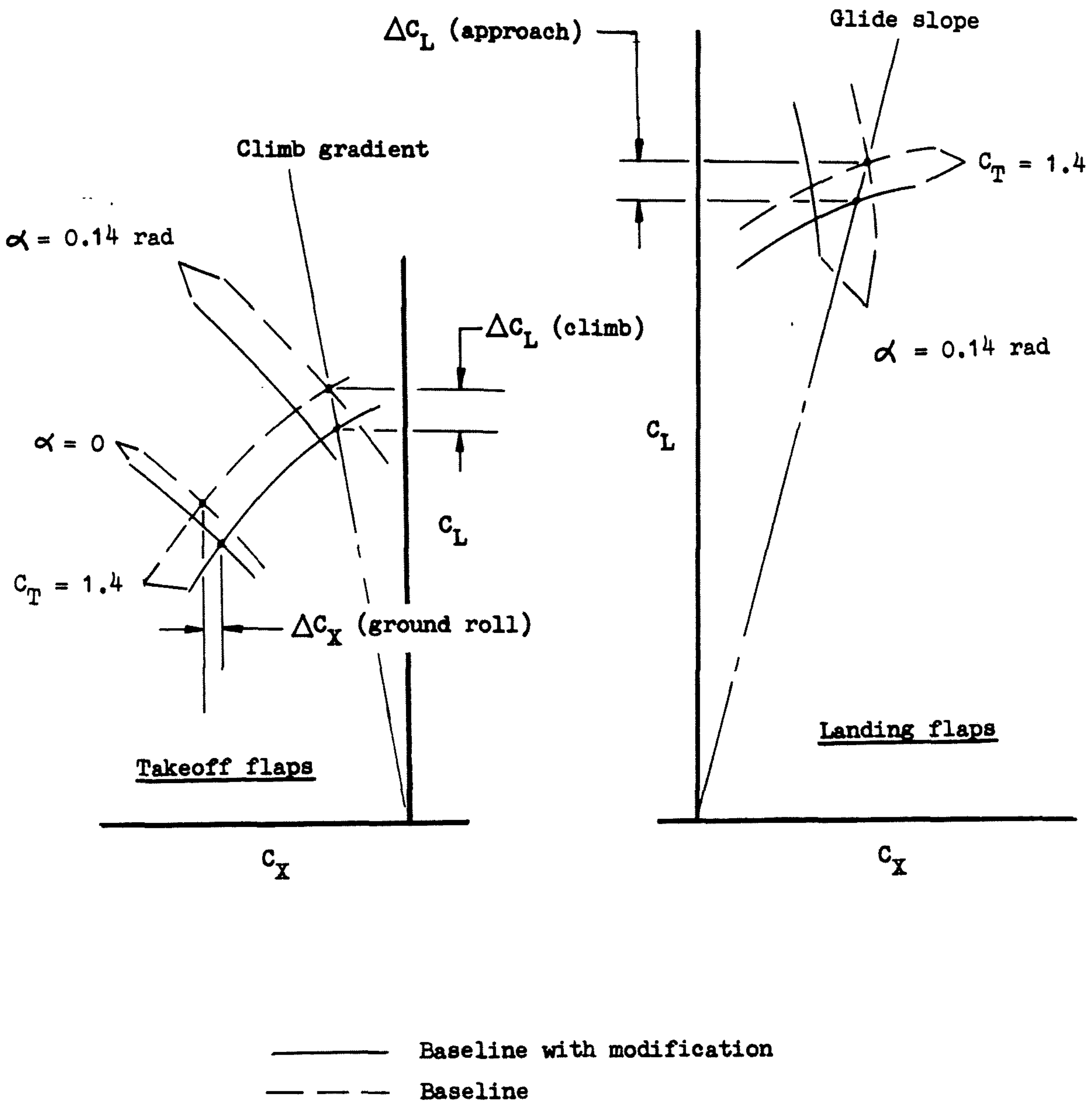

Figure 10-1.- Definitions of performance increments.

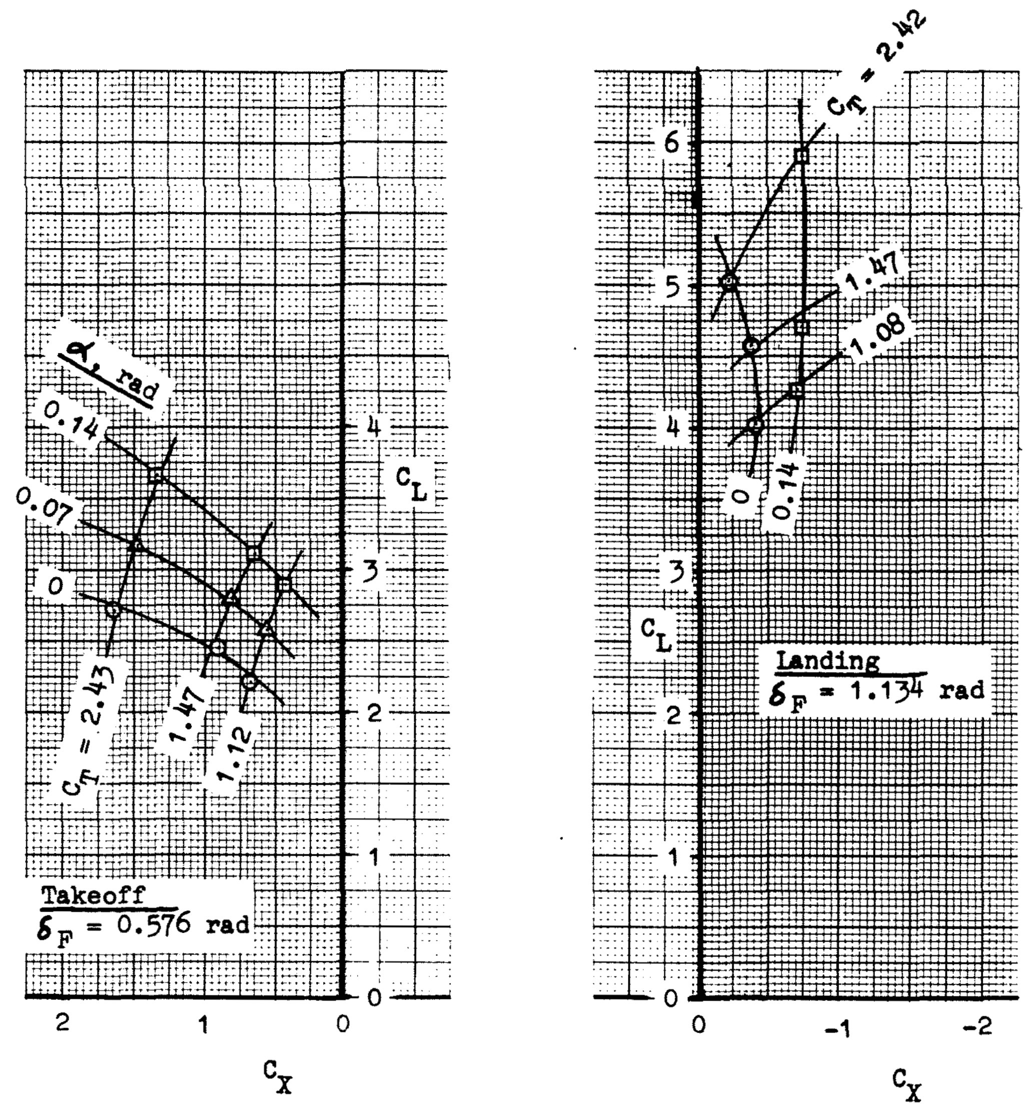

Figure 10-2.- Aerodynamic C_L-C_X maps, wind tunnel test, baseline B.

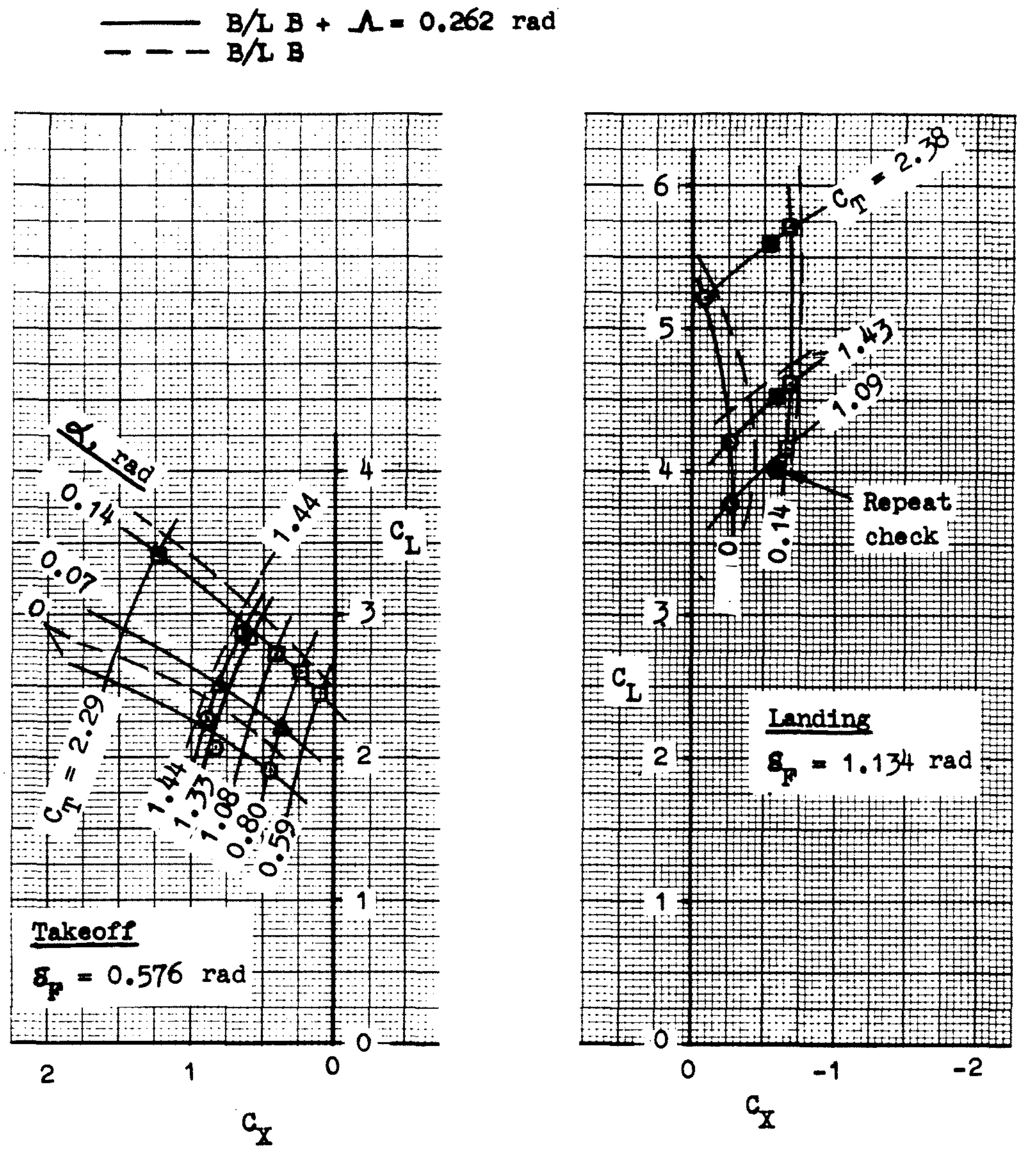

Figure 10-3.- Aerodynamic C_L-C_X maps, wind tunnel test, baseline B. Effect of wing sweep.

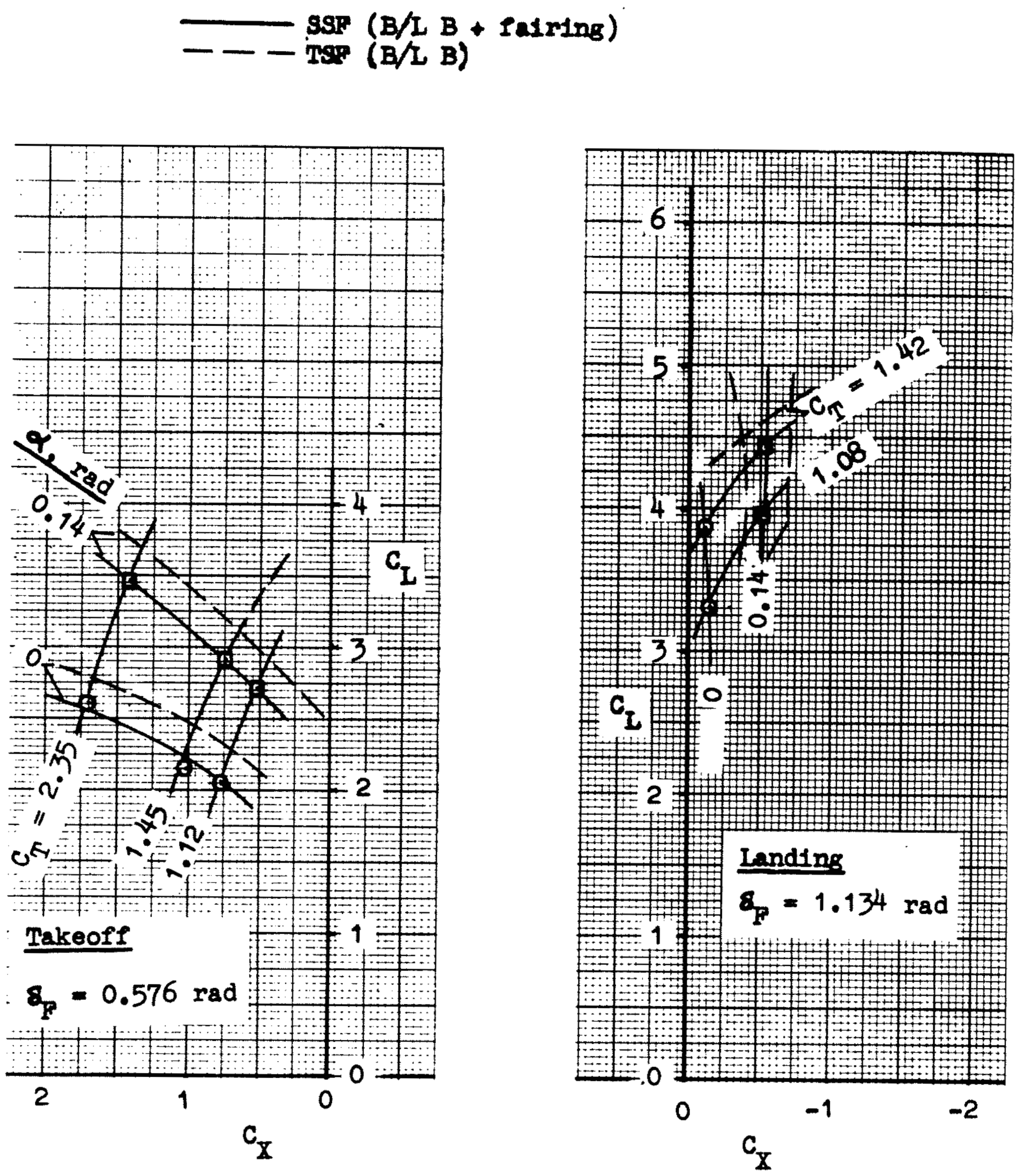

Figure 10-4.- Aerodynamic C_L-C_X maps, wind tunnel tests, baseline B. Single-slotted versus triple-slotted flaps.

—— SSF (B/L B + Λ = 0.262 rad + fairing)
— — — TSF (B/L B + Λ = 0.262 rad)

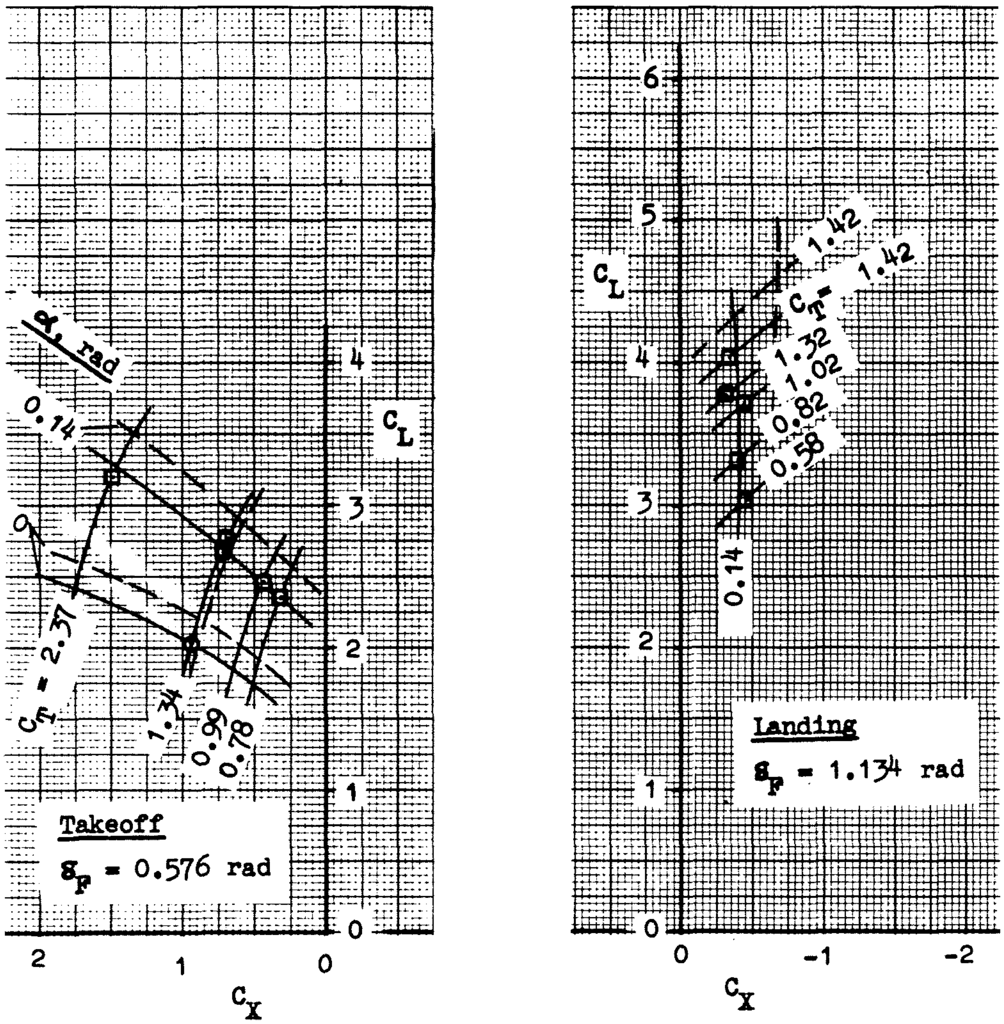

Figure 10-5.- Aerodynamic C_L-C_X maps, wind tunnel test, baseline B + T.E. sweep = 0.262 rad. Single-slotted versus triple-slotted flaps.

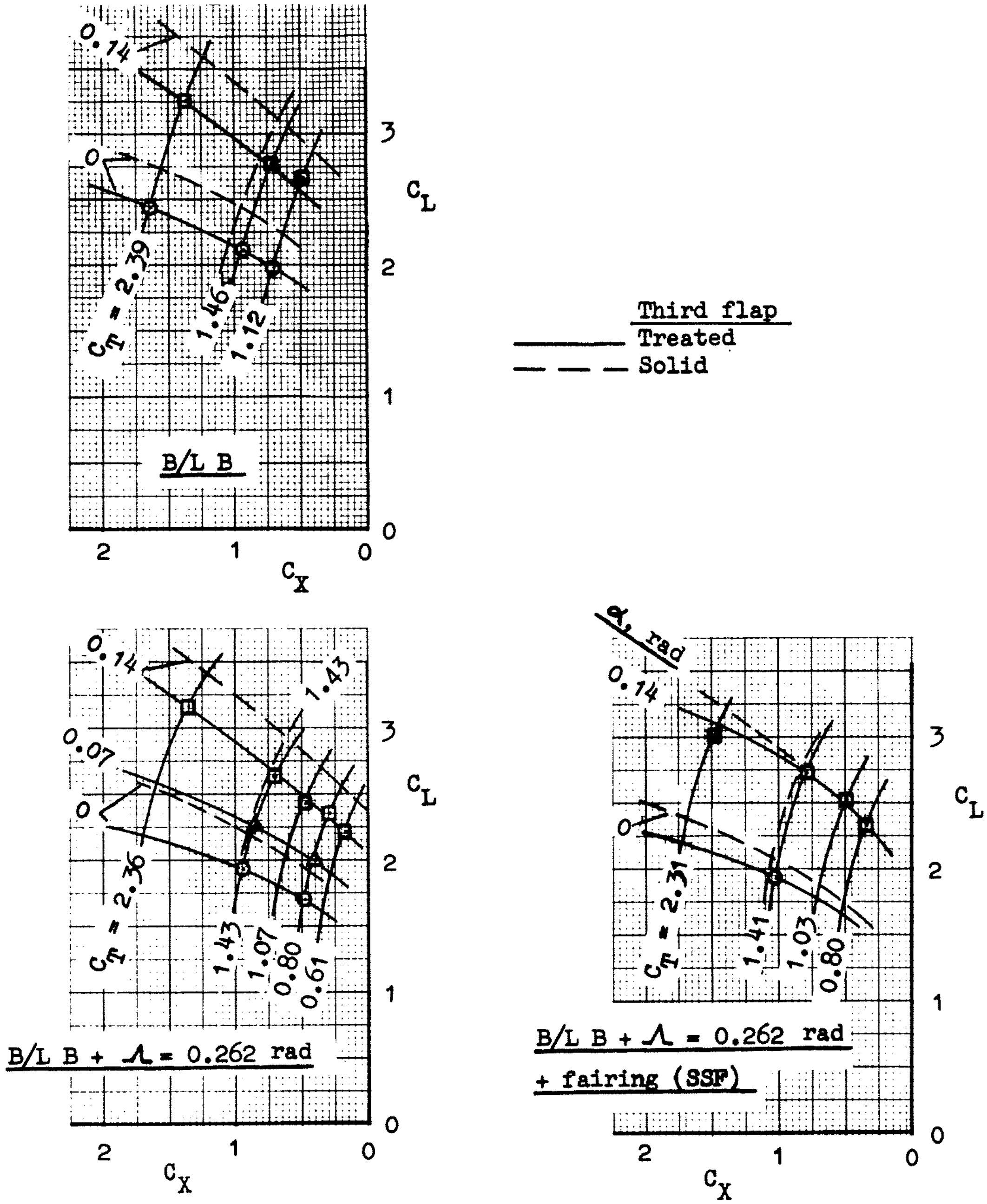

Figure 10-6.- Aerodynamic C_L-C_X maps, wind tunnel test. Baseline B and variations, takeoff, δ_F = 0.576 rad. Effect of third-flap treatment (18% perforated plate with stuffing).

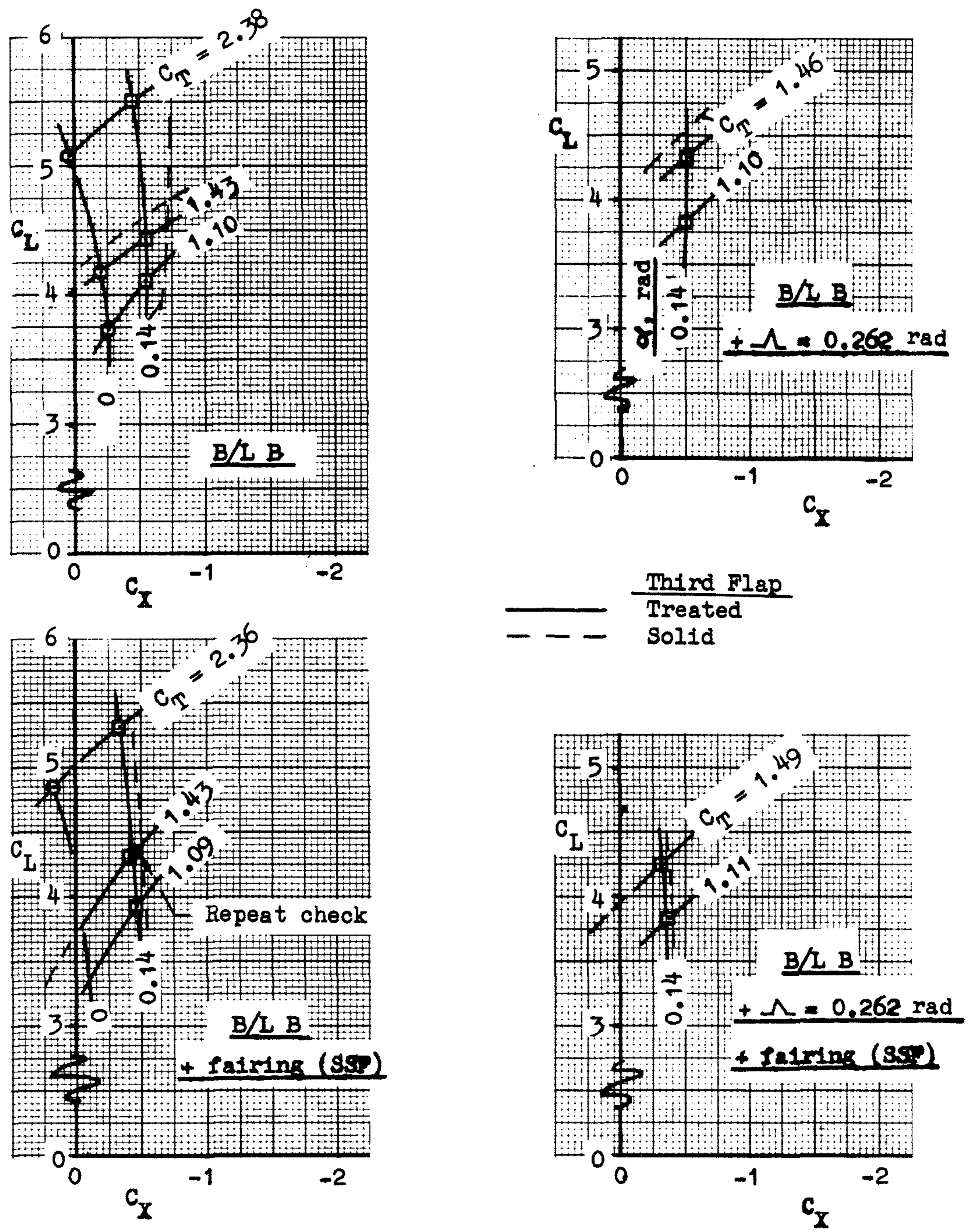

Figure 10-7.- Aerodynamic C_L-C_X maps, wind tunnel test. Baseline B and variations, landing, δ_F = 1.134 rad. Effect of third-flap treatment (18% perforated plate with stuffing).

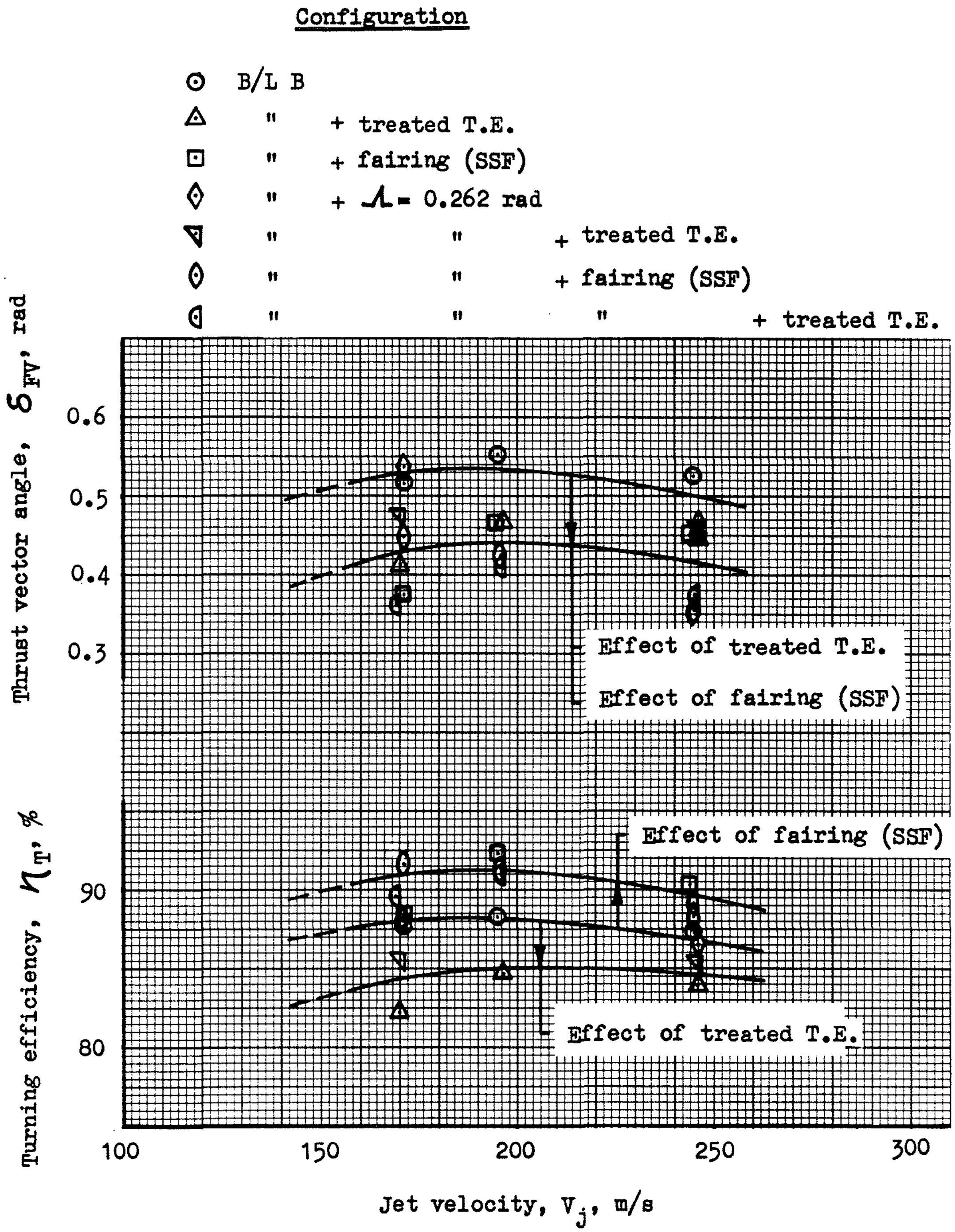

Figure 10-8.- Thrust vector angle and turning efficiency, wind tunnel test. Takeoff, δ_F = 0.576 rad. V_o = 0.

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11. APPLICATION TO AIRCRAFT

Reference Aircraft

The effects of a configuration on both noise and performance must be considered in evaluating its desirability for use on low-noise aircraft. The aircraft used in this report as the basis for such evaluations is shown in figure 11-1. It has a takeoff gross weight of 30,400 kg (67,000 lb), a wing area of 74.5 m^2 (801 ft^2), a design range of 926 km (500 n.m.), and a design takeoff field length of 762 m (2500 ft). The field length is based on Federal Aviation Regulations, which specify a 10.7-m (35 ft) obstacle, engine failure at the critical speed, and a 3% climb gradient after the failure. The engines are four TF34's, each having a takeoff rated thrust of 41,370 N (9300 lb) and a nozzle inside diameter of 88.5 cm (34.8 in). The corresponding mixed-flow exhaust conditions are 400° K (720°R), 265 m/s (870 ft/s), and 1.375 pressure ratio. The relationship between jet velocity and nozzle pressure ratio is shown in figure 11-2 for the full-scale and cold-test temperatures.

The landing field length of the reference aircraft is 564 m (1850 ft). Thus takeoff is critical from both the noise and performance standpoints. Maximum sideline noise has been found to occur when the aircraft is approximately 0.524 rad (30°) above the observer, and this elevation angle is used in the present evaluations.

The maximum sideline jet/flap interaction PNL of the reference aircraft is approximately 106.9 PNdB, as derived below:

Static test results corrected to full scale (four TF34's), 152.4-m, 0.524 rad (30°) elevation, V_j = 250 m/s. Baseline A, takeoff flap setting. From figure 6-6, PNLM =	109.2 PNdB
Correction to takeoff V_j (265 m/s). From table 6-III, V_j exponent = 7.5-	+1.9 PNdB
Static test results at V_j = 265 m/s -	111.1 PNdB

Correction for ground reflection, test pad to free field -	-0.1 PNdB	
Correction for ground reflection, free field to normal terrain -	+1.0 PNdB	
Correction from cold to hot jet -	-1.6 PNdB	
Correction for shielding by fuselage and nacelles, equivalent to 1.2 engines blocked -	-1.5 PNdB	
Forward speed effect at 43.8 m/s (85 kn), from figure 9-3(d) -	-2.0 PNdB	
Total corrections, full scale at test conditions to aircraft in flight -		-4.2 PNdB
Jet/flap interaction noise of reference aircraft, 152.4-m sideline, 0.524 rad (30°) elevation -		106.9 PNdB

Evaluating Design Modifications

Off-design evaluation. - Two methods of configuration comparison are presented herein. In the first, the baseline engine/aircraft is assumed to be retrofitted with the modification being considered; neither the airframe nor the engine are resized or reoptimized. If the modification impacts aircraft performance as well as noise, it is assumed that the engine is simply throttled or overboosted as required to achieve the same takeoff field length as the baseline. Thus the modified aircraft and the baseline aircraft have the same performance at takeoff and throughout the mission. The effect of the engine power change on noise is calculated and the noise difference at constant field length is used as the criterion for comparing the modification to the baseline and to other modifications.

Optimum-design figure of merit.- The foregoing method of evaluation is straightforward but does not consider relative cost-effectiveness and thus does not reflect the full potential achievable with the modification when the designer is free to reoptimize the aircraft and engine to meet

the mission constraints. The difference in DOC between off-design operation of the baseline and design-point operation of a reoptimized system can be large.

For example, in the case of a modification which reduces field length, it is only necessary to retard the throttle to achieve constant field length. This reduces noise but does nothing to DOC. With a reoptimized engine/airframe, however, any or all of wing area, engine size, and fan bypass ratio may be reduced, resulting in improved cruise efficiency, lower weight, decreased production costs, and lower DOC. The question to be answered, then, is how much noise reduction can be obtained by re-investing these cost savings in a quieter (albeit more costly) engine cycle.

Generalized noise-performance-cost trade-offs for optimum engine/airframe designs have been developed in an extensive study of quiet STOL aircraft for short-haul transportation, reported in reference 19. For a matrix of short-range short-takeoff design-point aircraft similar to the reference aircraft of the present report, reference 19 shows that sideline noise is a strong function of both design field length and engine cycle (or fan pressure ratio). Further, the reference shows that DOC is also a strong function of design field length and engine fan pressure ratio.

These results are summarized in figure 11-3, where the constant sideline noise levels are associated primarily with a constant fan nozzle pressure ratio (or bypass ratio and engine cycle). The cost of reduced sideline noise at a constant field length is the cost of the greater engine/airframe weight and poorer cruise efficiency associated with higher bypass ratio (or lower fan pressure ratio). It is to be noted, however, that this cost (of the engine cycle change) is the <u>minimum</u> necessary for sideline noise reduction; engine cycle change costs less in DOC than does the operation of oversized engines at reduced throttle settings, for example.

The referenced studies were necessarily parametric in nature and

addressed only state-of-the-art flap/high-lift performance. They were not sensitive to the effects of configuration refinements such as trailing edge treatment, flap gap variation, and variations in flap/nozzle geometric relationships. The second evaluation method used herein, referred to as the optimum-design figure of merit (FOM), assesses such modifications in terms of the noise reduction achievable through reoptimization of the modified baseline airplane, while maintaining baseline values of design field length and direct operating cost (DOC). In reality, such optimization is required when the proposed modification impacts performance or weight, and therefore field length.

Evaluation by FOM is based on the fact that any change in field length capability has an equivalent value in DOC, and the DOC change can be invested to change sideline noise level. For ease in application, the data of figure 11-3 have been cross-plotted in figure 11-4 to establish directly the equivalence between field length change and sideline noise level change at constant DOC.

In summary, then, the net PNdB change reflected in the FOM is the algebraic sum of the measured noise change and the noise change resulting from constant-DOC conversion of field length change to noise, from figure 11-4.

Evaluation Procedures

Both of the evaluation methods described above require the same two inputs - the effect of the modification on sideline PNLM 0.524 rad (30°) below the wing and the effect on takeoff field length. The former is obtained from the test data. The latter is calculated by considering the effect of the modification on four factors:

- Accelerating force during ground roll. This is derived from the wind tunnel data, as discussed in section 10, Wind Tunnel Aero/Propulsion results.

- Lift coefficient at climbout, also from the wind tunnel data.

- Fuel weight, determined from nozzle velocity coefficient change, if any, and from weight and drag effects on cruise fuel.

- Operating weight empty (OWE), estimated in consultation with design personnel.

The sensitivity of takeoff field length, over the required obstacle with an engine failure at the critical speed, to each of the above factors was determined for the reference aircraft. The following sensitivities of takeoff field length to a 1% increase in each of the four factors were obtained:

- Accelerating force: - 0.5% field length
- Lift coefficient: - 3.9% field length
- Fuel weight: + 0.6% field length
- OWE: + 2.9% field length

The fuel weight and OWE sensitivities would be essentially equal if based on absolute rather than percentage weight change, as fuel weight is approximately 4550 kg (10,000 lb) and OWE is approximately 20,500 kg (45,000 lb). These sensitivities were applied to the changes in the four parameters to calculate the percent change in field length.

For the off-design-operation evaluation, the thrust change required to return the aircraft to the baseline field length was then calculated and the jet velocity associated with the new thrust was read from figure 11-5, which comes from the TF34 engine specification. Velocity change was converted to sideline PNLM change by means of the appropriate V_j exponent. The noise change due to thrust change and the measured noise effect of the modification were added algebraically to obtain the measure desired - the net PNLM increment due to the modification.

In the FOM evaluation, measured PNLM increment was plotted against field length increment on figure 11-6. The difference in PNLM between the plotted point and the otpimized-aircraft-family curve is the FOM of the modification.

Both evaluation procedures express the effect of the modification in terms of a net change in noise. Negative values are favorable, indicating a decrease in noise compared to the reference configuration.

Evaluation Results

Effects of modifications on reference aircraft noise.- The table that follows shows the effects of the most significant modifications and combinations of modifications on the noise of the reference aircraft. The center columns of the table show the effects of the configuration on aerodynamic performance, in terms of field length, and on measured noise. Where two modifications are combined, the measured noise increment comes from a test of the combination, not from the sum of two increments. The last two columns show the integrated effects of the configuration on constant-field-length noise, first on the basis of off-design-point operation of the reference aircraft, then on the basis of a reoptimized aircraft and engine. All modifications in this table are compared to the baseline A nozzle/wing/flap configuration, the basic configuration of the reference aircraft.

No third-flap passive treatments are compared, as treatments had no conclusive effect on noise and caused a reduction in aerodynamic performance. In all comparisons the takeoff flap setting of baseline A was reduced from 0.698 rad (40°) to 0.646 rad (37°) to avoid the excessive drag and field length penalty associated with the former angle.

Effects of Modifications on Reference Aircraft Noise

Modification(s)	Effect of Mod(s) On F/L	Effect of Mod(s) On PNLM	Net Δ PNLM, 0.524-rad (30°) sideline plane Off-Des. Operation	Net Δ PNLM, 0.524-rad (30°) sideline plane Opt.-Des. FOM
Baseline B	-26.1%	+1.4 dB	+0.4 dB	-14.3 dB
Third-flap int. blowing	+2.3%	-0.5 dB	-0.4 dB	+0.5 dB
B/L B + mixer nozzle and treated ejector	-27.9%	-3.0 dB	-4.1 dB	-19.4 dB
B/L B single-sl. flap	-28.2%	+1.6 dB	+0.3 dB	-15.1 dB
B/L B + MNTE + SSF	-22.9%	-2.0 dB	-2.9 dB	-15.2 dB

The table indicates that incorporating baseline B and the mixer nozzle and treated ejector gives more improvement in reference aircraft noise than any other change, both in off-design operation and in a re-optimized aircraft. The potential noise reduction is 19 PNdB. It is assumed that the ejector shroud slides forward and stows after takeoff, as on some turbojet-powered commercial transports, but that the lobed mixer nozzle is fixed.

All four modifications involving a change to baseline B show excellent noise reductions on the FOM basis, although baseline B has a higher measured noise than baseline A (by 1.4 and 1.6 PNdB) unless it is combined with the mixer nozzle and treated ejector. The advantage of baseline B is in its better aerodynamic performance, which is due primarily to the elimination of wing sweep and a more efficient flap turning system. Wing sweep accounts for 16.1% of the 26.1% field length decrease shown. The other 10% is due to a 2% better turning efficiency.

Both modifications that use the mixer nozzle and treated ejector also show up well on the FOM basis. This is again due largely to improved performance, although the mixer nozzle configurations also provide direct noise reductions.

Third-flap internal blowing has little effect on noise or high-lift performance but the blowing system weight and associated drag cause a small field length penalty. This modification shows the only unfavorable FOM.

The results are quite different if the modifications are installed directly in the reference aircraft without reoptimization (off-design-operation column in table). First, the maximum achievable noise reduction is only 4 PNdB instead of 19. Second, the baseline B flap system without the mixer nozzle and treated ejector becomes a poor choice instead of a good one, and in fact results in a net noise increase of 0.3 or 0.4 PNdB. The rankings of the modifications in off-design operation are essentially the same as their rankings in terms of direct effect on noise, as throttling or overboosting without changing engine cycle or wing area has only a small effect on noise.

The comparisons illustrate the point made earlier: better aerodynamic characteristics allow noise to be reduced by simply throttling the engine; greater reductions can be achieved, however, by increasing engine bypass ratio and reducing wing area. The reduced jet velocity associated with the bypass ratio increase substantially reduces noise. Although engine cost increases, and cruise drag and nacelle manufacturing costs also increase due to the increased nacelle diameter, these increases are offset by the reductions in cruise drag and wing manufacturing cost associated with the smaller wing area, leaving DOC and field length unchanged with a substantial reduction in noise.

Effects of individual modifications on aircraft noise.- The purpose of the preceding table was to show how much the noise of the reference aircraft could be reduced. The starting point of each comparison was therefore the baseline A wing/flap/nozzle configuration. It is also of interest to examine the effect of each modification individually, when applied in various circumstances. Table 11-I shows the results of this investigation. Since the effect of a modification (mixer nozzle and treated ejector, baseline B, or single-slotted flap) is sometimes

established directly by a single comparison and sometimes by difference, the effects of the modification are distinguished from the supporting data by parentheses.

The top section of table 11-I shows that adding the mixer nozzle and treated ejector always results in lower aircraft noise, regardless of the starting configuration and of whether the basis of evaluation is off-design-point operation or FOM. The center section shows that switching from baseline A to baseline B can be quite helpful or mildly detrimental. On the FOM basis baseline B is most beneficial (11 or 14 PNdB improvement) when applied to a configuration that does not include a mixer nozzle and treated ejector but still provides a 5 or 6 PNdB benefit when added to a mixer nozzle and treated ejector. On the off-design basis baseline B is detrimental by 1 PNdB because of its higher measured noise.

The bottom section of the table shows that changing from the triple-slotted to the single-slotted flap has less effect than either of the other modifications. It reduces noise if the starting configuration does not include a mixer nozzle and treated ejector but increases noise if it does, since the combination of mixer nozzle and single-slotted flap has both higher measured noise and lower turning efficiency than the mixer nozzle and triple-slotted flap.

Limitations of evaluation.- It is important to recognize that the evaluation principles used herein, although based on sound principles and valid within their range of application, must be used with caution. Aerodynamic effects are much more significant than direct effects on noise in the comparisons presented but the sensitivity factors used deal only with first-order effects and do not recognize the nonlinearities that arise at significant perturbations from the baseline. The design of an aircraft with baseline B flaps or with a mixer nozzle may uncover problems not considered here. On the other hand, however, it is perhaps as likely that a flap and nozzle configuration can be found that will do even better than baseline B. Comprehensive design studies are the only valid basis for configuration selection.

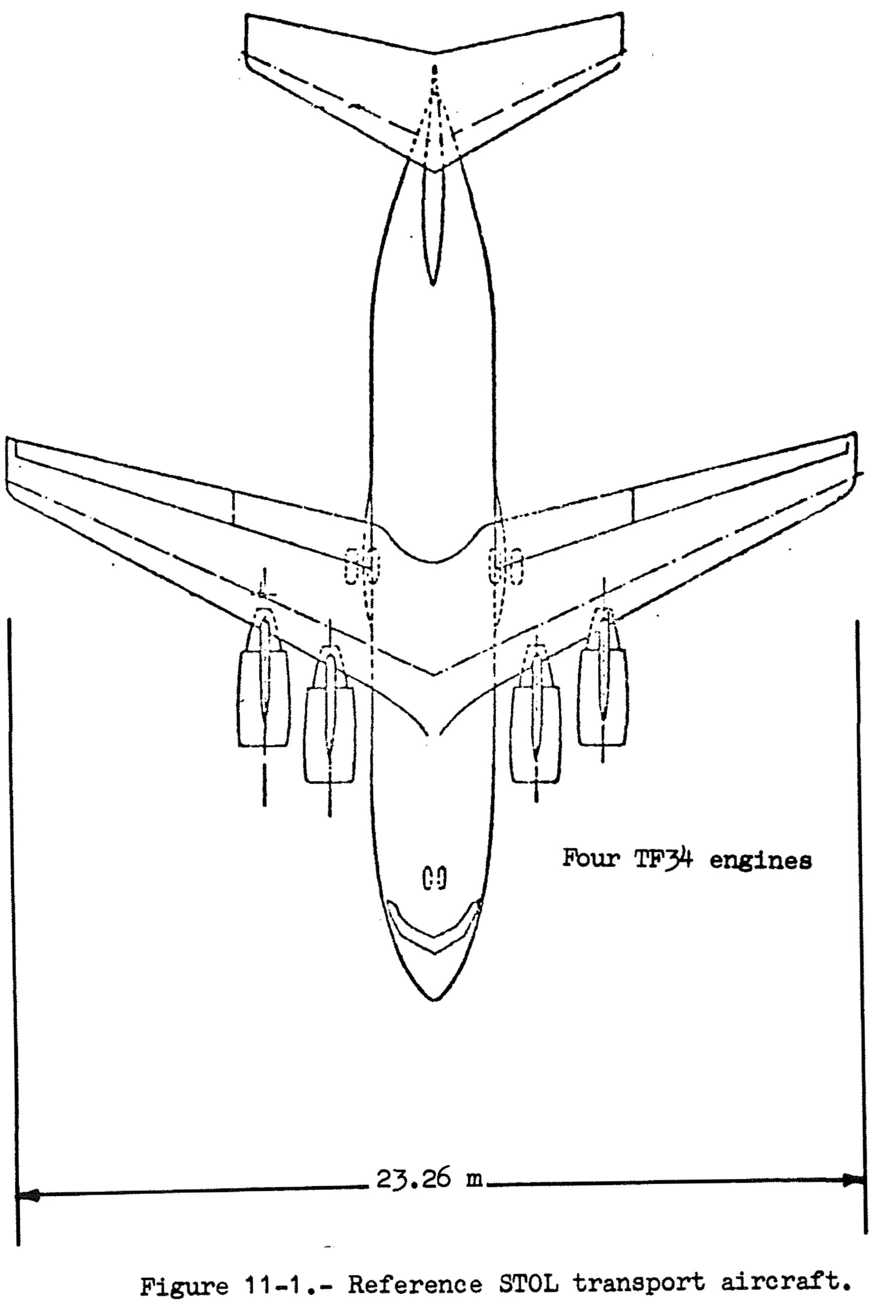

Figure 11-1.- Reference STOL transport aircraft.

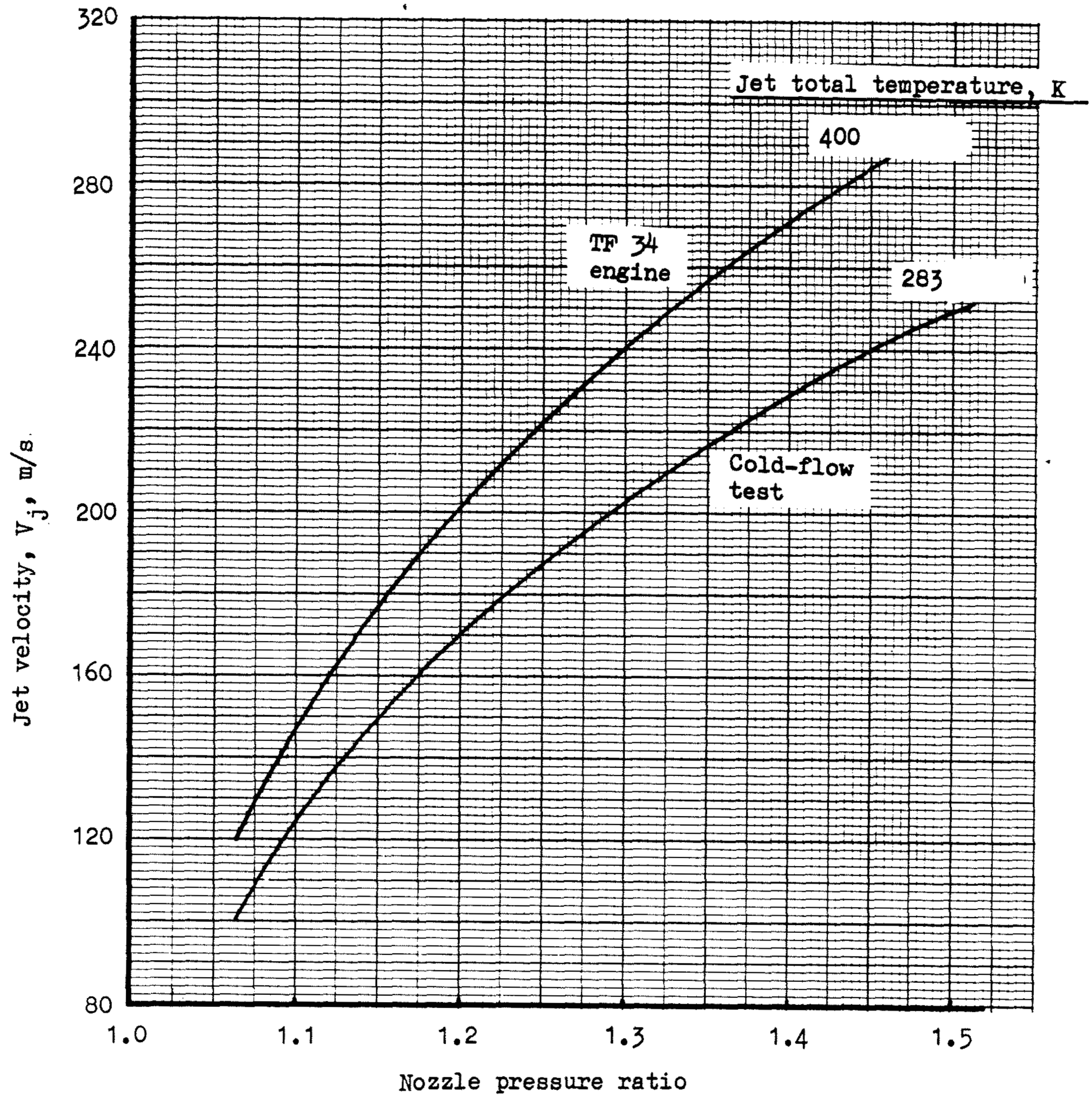

Figure 11-2.- Jet velocity versus nozzle pressure ratio.

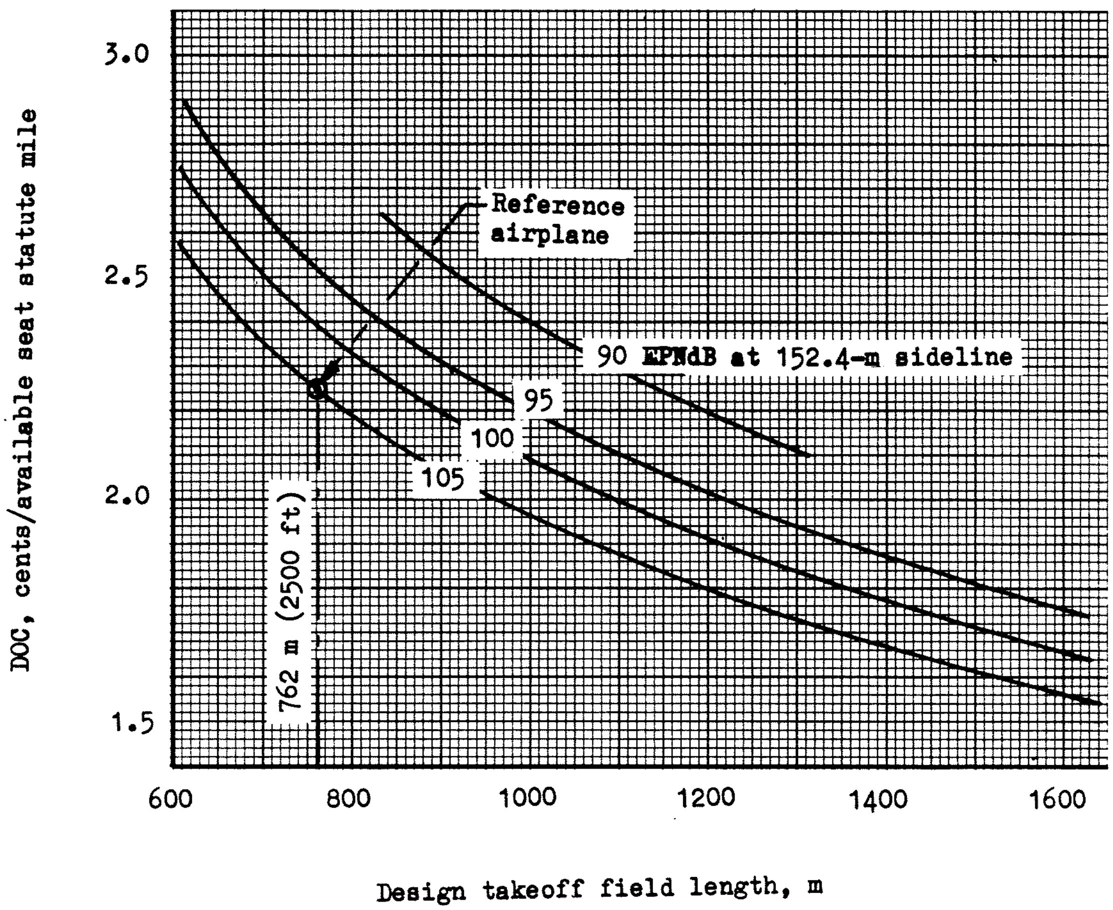

Figure 11-3.-Cost of reducing field length and noise.

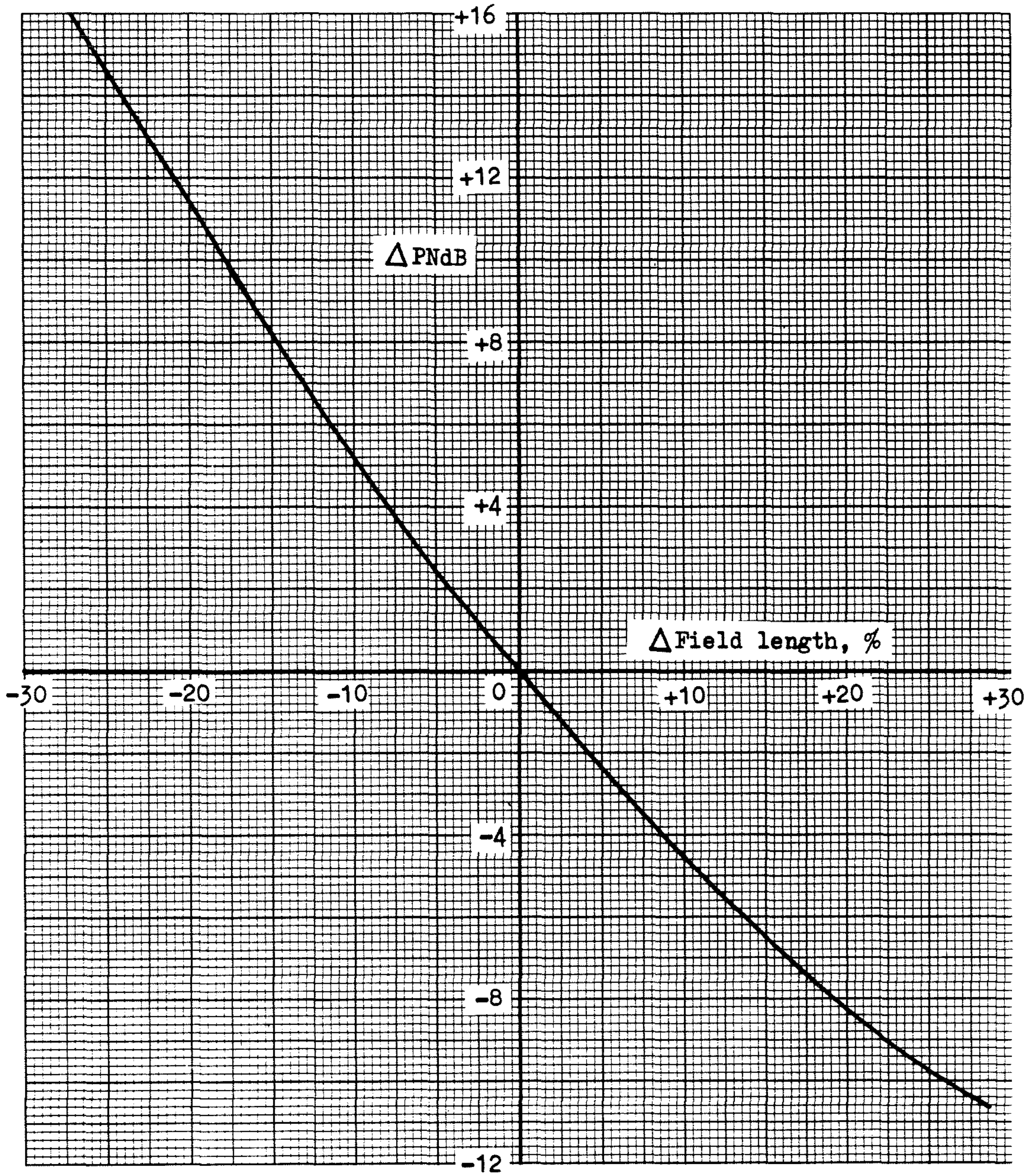

Figure 11-4.- Noise/field length tradeoff at constant DOC.

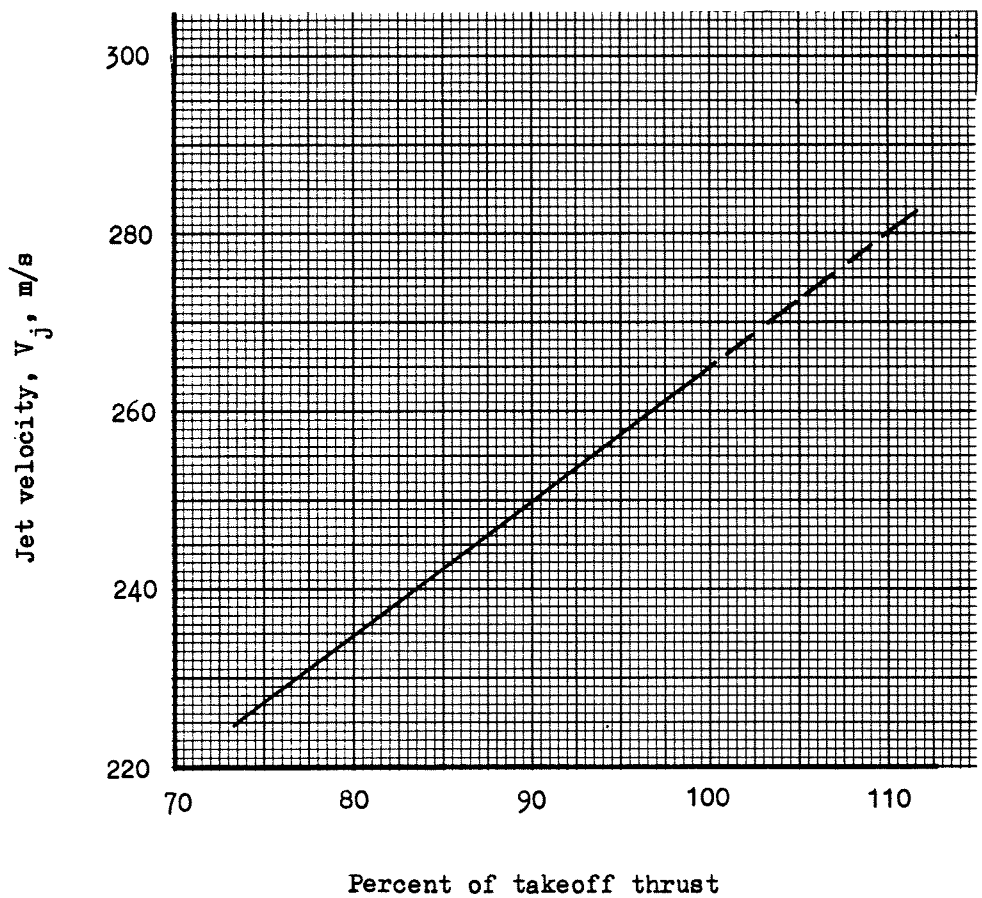

Figure 11-5.-Jet velocity versus engine thrust.
TF34 engine, V_o = 38.6 m/s.

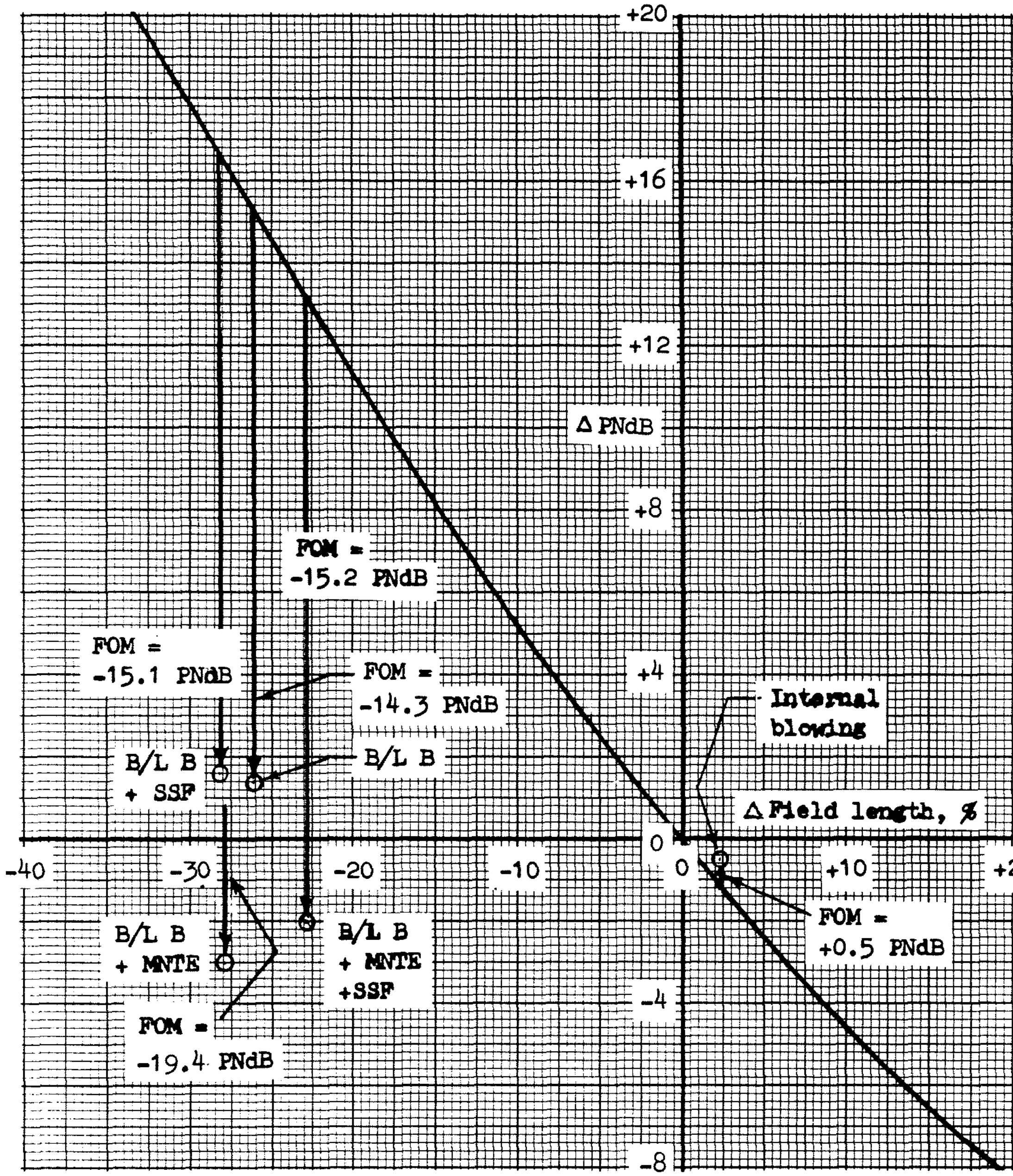

Figure 11-6.- Figures of merit for modifications to reference aircraft with baseline A nozzle/flap system.

TABLE 11-I. EFFECT OF INDIVIDUAL MODIFICATIONS ON AIRCRAFT NOISE.

- Modification is underlined.
- Effects of modification are shown in parentheses.
- Negative differences are favorable: modification reduces field length or noise.

Configuration	Reference Config.	Δ F/L From Ref.	Δ PNLM Config.	Net Δ PNLM, 0.524-rad (30°) sideline plane: Off-Des. Operation	Net Δ PNLM, 0.524-rad (30°) sideline plane: Opt.-Des. FOM
B/L B + MNTE	B/L B	(-17.1%)	(-4.4 dB)	(-5.0 dB)	(-13.8 dB)
B/L B	B/L A	-26.1%	+1.4 dB	+0.4 dB	-14.3 dB
B/L B + MNTE	B/L A	-27.9%	-3.0 dB	-4.1 dB	-19.4 dB
		(-1.8%)	(-4.4 dB)	(-4.5 dB)	(-5.1 dB)
B/L B + SSF	B/L B	-5.9%	-0.9 dB	-1.1 dB	-3.9 dB
B/L B + SSF + MNTE	B/L B	-12.3%	-3.4 dB	-3.9 dB	-10.0 dB
		(-6.4%)	(-2.5 dB)	(-2.8 dB)	(-6.1 dB)
B/L B	B/L A	(-26.1%)	(+1.4 dB)	(+0.4 dB)	(-14.3 dB)
B/L B + SSF	B/L B	-5.9%	-0.9 dB	-1.1 dB	-3.9 dB
B/L B + SSF	B/L A	-28.2%	+1.6 dB	+0.3 dB	-15.1 dB
		(-22.3%)	(+2.5 dB)	(+1.4 dB)	(-11.2 dB)
B/L B + MNTE	B/L B	-17.1%	-4.4 dB	-5.0 dB	-13.8 dB
B/L B + MNTE	B/L A	-27.9%	-3.0 dB	-4.1 dB	-19.4 dB
		(-10.8%)	(+1.4 dB)	(+0.9 dB)	(-5.6 dB)
B/L B + SSF + MNTE	B/L B	-12.3%	-3.4 dB	-3.9 dB	-10.0 dB
B/L B + SSF + MNTE	B/L A	-22.9%	-2.0 dB	-2.9 dB	-15.2 dB
		(-10.6%)	(+1.4 dB)	(+1.0 dB)	(-5.2 dB)
B/L B + SSF	B/L B	(-5.9%)	(-0.9 dB)	(-1.1 dB)	(-3.9 dB)
B/L B	B/L A	-26.1%	+1.4 dB	+0.4 dB	-14.3 dB
B/L B + SSF	B/L A	-28.2%	+1.6 dB	+0.3 dB	-15.1 dB
		(-2.1%)	(+0.2 dB)	(-0.1 dB)	(-0.8 dB)
B/L B + MNTE	B/L B	-17.1%	-4.4 dB	-5.0 dB	-13.8 dB
B/L B + MNTE + SSF	B/L B	-12.3%	-3.4 dB	-3.9 dB	-10.0 dB
		(+4.8%)	(+1.0 dB)	(+1.1 dB)	(+3.8 dB)

12. SUMMARY OF RESULTS

Cold-flow tests of externally blown flap configurations were conducted at one-fifth scale in an outdoor static test facility and at one-tenth scale in a large acoustically-treated closed-throat wind tunnel. The objective of the program was to develop the technology and develop techniques to reduce jet/flap interaction noise.

In the static facility, noise was measured by eleven microphones on a rotatable arch of 6.15-m (20-ft) radius. Noise in the wind tunnel was measured by twelve microphones in a fixed array covering the underwing quartersphere at a radius of 2.44 m (8 ft). Aero/propulsion forces on the model were measured in both programs.

The static models represented two triple-slotted flap designs at both takeoff and landing settings, two conical nozzles, and a fluted mixer nozzle with removable ejector. Many third-flap trailing-edge modifications, primarily various types of porous and flexible edges, were tested. Internal blowing from the third-flap trailing edge and its vicinity, as well as fairings covering the flap slots and variations in slot gap, trailing edge sweep angle, and nozzle position were tested extensively.

The wind tunnel model was tested in a semispan version with one conical nozzle. The configuration variables in the wind tunnel test were flap setting, triple-slotted or single-slotted flaps, sweep angle, and the use of a solid or perforated third flap.

Static Test Results

At the takeoff flaps and takeoff jet velocity, the best results with passive flap treatments showed noise reductions of approximately 1.5 PNdB both in the flyover plane and in the sideline plane at 0.524 rad (30°) elevation. The two basic flap designs also differed by approximately 1.5 PNdB in both planes, the original design, baseline A, being better than baseline B in regard to noise but less efficient aerodynamically. Blowing from the third flap reduced noise by approximately 0.5 PNdB in the flyover plane;

blowing was not tested in the sideline plane. The mixer nozzle and treated ejector reduced noise by approximately 6 PNdB in the flyover plane and 4.5 PNdB in the sideline plane, compared to the baseline B nozzle and flap system. The reductions due to covering the flap slots were approximately 1 PNdB at flyover and 2 PNdB at sideline.

Wind Tunnel Test Results

The effect of forward speed on jet-alone noise in the nozzle exit plane was approximately proportional to the relative velocity (jet to free-stream) to the sixth power. The effect of forward speed on jet/flap interaction noise was strongly directional. With triple-slotted flaps at takeoff, the increment at 41.2 m/s (80 kn) varied from -3 dB at the central angles in the flyover plane, to -2 dB at these angles in the 0.524-rad (30°) sideline plane, +1 dB at the wingtip, and +3 dB at the aft microphone in the 0.524-rad sideline plane. The data suggest that the forward speed effects directivity pattern is the sum of an underwing source, primarily jet noise, that decreases with forward speed, and an overwing source, associated with flap slot exit flow, that increases with forward speed.

Application to Aircraft

The maximum 152.4-m (500-ft) sideline noise of the swept-wing reference aircraft at the critical 0.524-rad (30°) elevation angle after takeoff was determined from the test data to be approximately 107 PNdB with the reference nozzle and flap system. Holding a constant field length, a flap/nozzle/pylon retrofit to the best combination of noise reduction concepts, including the mixer nozzle and stowable ejector, would result in a noise reduction of about 4 PNdB (3 PNdB direct noise reduction plus 1 PNdB due to lower required jet velocity). However, noise levels approaching 19 PNdB lower than that of the reference aircraft appear to be attainable with a new aerodynamically optimized aircraft and engine cycle.

APPENDIX A

TABULATED STATIC-TEST SPECTRA

Abbreviated full-scale 152.4-m sideline (or flyover) spectra for all microphone locations and all configurations tested in the static program are listed in the following table. Five one-third-octave bands, an octave apart, with full-scale center frequencies of 315, 630, 1250, 2500, and 5000 Hz, were selected as representative of the more important and more consistent portion of the spectrum. At frequencies below 315 Hz, the spectra are often ragged because of ground reflections, while above 5000 Hz the signal level begins to get too low for valid resolution. The SPL's in each band, as well as OASPL, were curve-fitted against log V_j for each microphone. The tables list the curve-fitted SPL's and OASPL at 250 m/s, the exponent of V_j, and the scatter of the points about the fitted curve. Configurations can be identified by reference to table 6-III at the appropriate run number.

Almost all configurations and microphones show SPL decreasing with increasing frequency, as in spectrum plots. The exponent of V_j is less consistent but usually increases with increasing frequency. The V_j exponent for OASPL in the tables is close to low-frequency SPL exponents, since high-frequency noise levels are too low to have much impact on OASPL.

The data in these tables have not been corrected for the effect of ambient temperature and pressure on source power, discussed in section 6, Treatment of Acoustic Data. The applicable corrections are listed in table 6-I.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
RUNS 157- 164, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315							95.9	4.02	.27	98.8	6.25	.39	98.9	6.60	.21			
630							91.7	6.62	.24	93.7	7.14	.09	92.3	7.19	.16			
1250							87.1	8.00	.23	89.0	6.86	.47	89.1	7.69	.18			
2500							83.3	8.77	.15	85.4	4.72	.59	85.3	6.94	.60			
5000							77.2	7.40	.12	81.5	4.53	.30	80.3	6.12	.32			
OASPL							105.7	5.26	.25	107.7	6.07	.24	107.4	6.19	.16			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	98.3	7.04	.18	99.7	7.47	.11	96.4	6.97	.39	92.9	6.48	.53	85.6	5.40	.28	83.3	5.60	.39
630	92.1	7.46	.06	94.2	7.47	.11	92.2	6.46	.21	88.8	5.46	.64	85.3	6.66	.59	82.1	6.59	.43
1250	88.1	7.85	.18	90.3	8.18	.07	88.3	7.18	.09	84.6	7.13	.54	81.2	7.26	.50	77.9	7.39	.22
2500	85.2	8.96	.11	87.0	8.41	.16	85.3	7.78	.06	82.6	6.79	.97	74.7	7.05	.30	71.4	8.03	.96
5000	79.8	8.23	.28	82.6	8.38	.21	81.1	8.00	.24	77.7	6.84	.66	67.2	4.22	.77	62.0	7.28	1.37
OASPL	107.2	5.95	.29	108.9	5.35	.07	107.6	6.06	.17				100.0	5.94	.31	96.8	5.54	.34
RUNS 157- 164, MICROPHONES 0 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	86.9	6.75	.41				88.2	6.94	.22	89.4	6.85	.38	89.3	6.82	.37			
630	81.1	6.44	.05				85.6	7.63	.43	86.0	7.02	.46	84.7	6.66	.41			
1250	75.9	6.96	.47				82.1	6.84	.34	81.9	8.08	.81	82.1	6.77	.58			
2500	67.0	5.09	.73				76.6	3.33	.73	80.4	8.28	1.69	80.8	6.16	.53			
5000	55.4	3.51	.86				70.0	.09	.90	77.3	8.81	1.65	77.0	5.89	.71			
OASPL	95.6	5.27	.10				98.3	5.75	.32	98.6	6.26	.62	98.5	6.04	.28			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	88.8	7.07	.50	90.5	7.12	.35	89.2	6.49	.35	92.0	4.85	.69	93.8	5.48	.16	91.5	6.38	.72
630	83.9	6.90	.29	85.7	7.02	.43	87.1	7.65	.43	86.5	6.05	.78	90.2	6.38	.56	87.4	6.53	.32
1250	79.9	6.82	.47	81.7	6.47	.37	83.4	7.87	.64	82.8	5.53	.46	85.2	6.36	.56	81.8	6.38	.16
2500	76.2	4.06	.76	77.2	2.58	.90	78.2	7.87	.83	78.8	5.65	.68	80.1	5.55	.52	76.7	6.00	.24
5000	71.5	-.21	1.29	73.0	1.11	.89	72.6	6.54	.93	74.5	4.98	.37	73.0	5.09	.78	67.8	6.27	.16
OASPL	97.5	5.89	.32	99.7	6.23	.30	99.7	6.53	.33	101.7	5.33	.50	103.5	5.93	.26	101.4	6.56	.23
RUNS 213- 228, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	90.9	6.86	.36	96.4	6.72	.23	98.5	5.98	.48	99.7	6.25	.35	99.9	6.19	.27			
630	86.5	6.62	.24	93.1	7.66	.59	94.3	7.04	.15	95.6	7.12	.57	93.8	6.70	.10			
1250	81.8	8.29	.13	88.0	9.18	.74	85.8	8.82	.07	89.4	8.93	.20	89.0	8.89	.14			
2500	74.3	8.69	.18	82.0	9.34	.54	83.6	9.27	.21	85.5	9.89	.19	85.2	8.86	.23			
5000	65.5	7.90	.17	73.4	8.09	.21	77.4	8.43	.21	80.3	9.42	.27	80.1	8.45	.13			
OASPL	101.7	5.16	.17				108.2	5.17	.25	108.7	5.64	.32	108.1	5.36	.21			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	97.8	5.23	.25	95.3	5.67	.06	92.6	5.94	.13	84.2	5.10	.28	87.8	6.93	.21	91.8	6.95	.14
630	92.1	6.46	.05	90.5	7.49	.30	89.5	6.75	.19	81.0	5.04	.45	82.8	7.45	.37	85.8	6.47	.23
1250	88.4	8.15	.09	87.7	8.44	.21	87.1	7.80	.26	77.8	6.31	.48	79.1	7.82	.54	78.9	6.89	.20
2500	85.2	8.90	.14	84.8	9.07	.36	84.2	8.57	.16	73.8	6.12	.44	73.0	8.62	.14	73.1	7.65	.30
5000	79.6	8.20	.08	79.4	8.61	.43	81.7	8.29	.05	69.9	6.54	.44	66.2	9.11	.22	65.2	7.18	.24
OASPL	107.3	5.19	.09	106.3	6.17	.22	106.1	6.29	.15	98.5	4.79	.56	102.0	6.11	.67	102.9	6.16	.12
RUNS 213- 228, MICROPHONES 60 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	84.0	6.95	.50	88.0	6.91	.56	90.4	6.75	.38	92.7	6.77	.36	93.1	7.10	.38			
630	80.3	7.50	.36	84.2	7.74	.41	85.7	7.16	.22	89.4	7.98	.17	88.7	7.63	.08			
1250	74.0	9.49	.42	78.8	8.90	.20	81.2	9.45	.04	82.5	10.*	.03	82.5	9.79	.14			
2500	64.8	9.79	.26	72.1	9.75	.28	74.8	10.*	.07	77.6	11.*	.19	77.8	10.*	.20			
5000	50.8	8.88	.42	61.2	8.95	.16	66.4	9.33	.17	69.7	10.*	.15	71.0	10.*	.27			
OASPL	94.1	5.41	.41	98.5	5.95	.46	100.3	5.81	.29	101.9	6.24	.21	101.8	6.34	.19			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.2	5.85	.35	90.3	6.33	.28	88.3	6.47	.39	79.7	5.96	.60	82.7	6.22	.60	84.8	7.37	.43
630	86.2	6.78	.30	83.9	7.29	.14	82.9	7.45	.30	77.1	6.44	.70	77.2	6.29	.35	79.3	8.27	.46
1250	80.8	8.95	.25	80.3	8.52	.10	79.8	8.34	.33	73.8	7.24	.61	72.5	7.68	.61	70.3	8.09	.15
2500	77.1	9.73	.16	76.4	9.21	.22	75.7	8.71	.31	70.4	8.40	.51	64.6	8.21	.41	62.8	8.71	.31
5000	69.1	9.19	.22	69.2	9.10	.39	71.2	9.16	.41	62.8	8.39	.31	54.1	8.38	.44	50.1	8.47	.62
OASPL	100.4	5.76	.39	99.7	6.29	.23	100.1	7.09	.22	93.9	5.90	.69	95.1	6.20	.51	96.8	6.93	.35

TABLE A-I.- ABBREVIATED STATIC-TEST SPECTRA. FULL SCALE, 152.4-M (500-FT) SIDELINE OR FLYOVER. TEST SERIES 1.

ORIGINAL PAGE IS
OF POOR QUALITY

MID FREQ, 1/3 OCT — SPL, 250 M/S — EXP. OF VJ — SCATTER

RUNS 213- 228, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.6	7.34	.61	91.0	7.40	.06	91.9	6.79	.33	94.0	7.45	.30	94.4	6.68	.54
630	82.2	7.14	.49	88.2	7.60	.21	88.3	7.74	.41	91.7	8.27	.23	90.7	7.29	.38
1250	77.9	8.54	.45	85.0	9.65	.36	85.7	9.15	.36	86.7	9.61	.38	86.6	9.29	.56
2500	70.7	9.34	.12	78.7	9.82	.30	81.1	9.97	.21	82.4	10.*	.41	82.9	9.67	.38
5000	61.3	8.73	.36	71.0	9.28	.13	74.7	9.01	.35	77.8	10.*	.36	78.4	9.78	.42
OASPL	97.2	5.24	.41	102.2	6.09	.10	103.4	5.62	.44	105.0	6.65	.13	104.9	6.32	.31

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.9	6.33	.46	90.1	5.81	1.30	87.7	4.33	.84	83.3	6.32	1.33	91.4	5.92	.20	89.7	7.86	.42
630	89.2	7.14	.49	85.5	5.81	.80	85.4	4.90	.95	81.1	7.18	1.74	88.5	7.58	.16	84.6	7.05	.36
1250	85.3	8.64	.44	83.4	7.21	.55	82.4	5.14	.99	79.1	8.30	1.39	79.0	7.97	.31	77.2	7.76	.66
2500	82.6	9.57	.41	80.9	7.67	.36	79.6	5.81	.88	78.4	7.93	1.65	74.0	8.45	.48	71.4	8.30	.84
5000	77.7	9.25	.40	76.1	7.87	.34	77.4	7.40	1.40	69.6	7.69	1.95	67.0	8.85	.55	63.2	8.25	.61
OASPL	103.7	6.12	.29	101.4	5.89	.71	90.2	-20*	9.39	97.6	6.18	1.27	102.4	7.17	.38	101.6	7.12	.48

RUNS 213- 228, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.8	7.49	.43	88.2	7.46	.22	89.6	7.06	.25	91.1	7.22	.23	90.5	7.11	.10
630	78.7	8.00	.48	83.6	8.06	.39	87.4	8.20	.33	87.0	7.90	.10	86.1	8.03	.20
1250	74.2	8.75	.20	79.3	8.55	.20	83.6	9.22	.49	84.2	9.90	.45	83.7	9.49	.21
2500	67.1	9.69	.38	74.3	9.30	.50	78.5	9.50	.38	80.8	10.*	.48	81.3	10.*	.32
5000	58.2	9.34	.36	67.2	8.72	.37	73.2	9.34	.36	76.1	9.96	.32	76.9	10.*	.22
OASPL	97.1	5.93	.26	100.6	6.31	.16	102.1	6.48	.12	101.9	6.43	.11	101.5	6.78	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.0	7.14	.13	86.8	6.65	.12	85.1	5.50	.53	92.7	8.41	.61	91.3	7.67	1.06	90.2	7.25	.18
630	84.5	7.69	.27	83.4	7.44	.12	83.1	6.11	.25	85.5	7.42	.52	86.7	7.69	.81	86.5	7.65	.41
1250	82.7	9.24	.36	81.3	8.12	.25	81.0	7.29	.13	81.0	8.36	.55	81.9	8.86	1.03	79.8	7.95	.65
2500	80.0	9.69	.38	79.4	9.10	.32	78.5	8.26	.21	75.5	8.21	.49	76.3	8.59	1.10	74.2	8.27	.70
5000	75.8	9.85	.40	75.0	9.11	.34	76.9	8.58	.14	69.2	7.92	.34	70.7	9.53	1.33	67.0	8.15	.69
OASPL	100.4	6.91	.12	96.8	6.42	.25	99.2	6.58	.30	102.4	6.91	.45	103.6	7.63	.88	102.0	6.37	.18

RUNS 233- 248, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.6	7.07	.43	93.8	6.80	.08	96.7	6.00	.24	98.8	5.90	.05	99.4	6.57	.15
630	85.8	7.18	.33	90.7	7.32	.06	93.2	7.20	.40	95.6	6.75	.16	95.2	6.95	.22
1250	80.3	8.25	.15	85.4	8.57	.24	87.7	8.92	.11	88.1	8.46	.12	88.8	8.77	.16
2500	72.9	8.69	.11	80.4	9.32	.06	82.3	9.10	.21	83.8	9.04	.29	84.9	9.01	.29
5000	64.3	7.82	.20	72.4	8.26	.06	76.6	8.36	.21	78.9	8.56	.05	80.0	8.18	.16
OASPL	100.1	5.00	.17	105.0	5.44	.05	107.2	5.15	.17	108.0	5.25	.06	108.4	5.61	.26

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.3	5.80	.49	98.7	6.09	.60	96.3	5.30	.25	90.0	7.66	.56	85.8	7.91	.54	78.3	5.11	.30
630	94.5	6.85	.40	93.0	7.24	.25	91.8	6.72	.21	86.0	7.74	.25	82.9	8.34	.52	74.1	5.91	.31
1250	88.1	8.59	.52	87.9	8.78	.13	87.8	8.53	.16	81.9	7.96	.45	79.8	8.92	.67	68.0	6.70	.33
2500	84.4	8.83	.59	84.6	9.20	.19	84.5	8.76	.20	79.1	8.71	.60	75.7	8.76	.62	62.4	7.22	.18
5000	79.2	8.48	.76	80.0	9.14	.25	81.9	8.64	.16	73.6	8.01	.39	70.6	9.01	.57	54.8	6.75	.55
OASPL	108.0	5.37	.49	107.1	5.63	.15	107.0	5.83	.06	103.7	7.82	.52	101.5	7.88	.44	95.4	5.09	.24

RUNS 233- 248, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.7	6.76	.19	86.2	6.91	.20	87.9	6.65	.26	90.9	6.84	.26	91.5	6.90	.44
630	78.4	6.84	.06	83.2	6.76	.19	84.5	6.80	.23	87.4	7.26	.18	87.2	7.27	.32
1250	71.7	7.99	.13	77.6	8.61	.15	79.5	8.34	.24	80.9	9.39	.19	80.8	9.10	.18
2500	63.0	8.67	.29	70.6	8.93	.11	73.3	8.89	.03	75.5	9.88	.22	76.5	9.82	.22
5000	49.0	7.79	.30	59.6	7.86	.29	64.8	7.93	.28	68.4	9.48	.17	69.3	9.20	.18
OASPL	92.7	4.86	.17	97.0	5.27	.16	99.2	5.20	.16	100.7	5.84	.33	100.8	5.87	.38

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.0	5.99	.07	91.9	5.99	.15	90.1	5.82	.20	83.4	5.25	.54	77.5	6.98	.29	71.5	4.49	.34
630	87.3	6.55	.21	86.4	7.22	.20	84.3	6.13	.18	78.9	6.52	.65	75.0	7.83	.32	67.5	5.99	.20
1250	80.1	8.17	.14	81.0	9.12	.13	80.3	8.49	.19	74.5	7.29	.55	70.7	8.07	.39	58.6	6.08	.33
2500	75.8	8.80	.54	77.0	9.59	.28	76.2	8.79	.13	70.0	7.47	.68	66.0	8.33	.21	51.4	6.64	.31
5000	68.4	8.40	.26	69.6	9.14	.45	70.9	8.02	.18	62.8	7.81	.50	57.4	8.52	.32	39.8	6.87	.41
OASPL	100.1	5.11	.17	100.0	6.01	.14	99.5	5.66	.17	96.6	6.78	.82	94.0	7.83	.29	88.7	4.69	.21

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT — SPL, 250 M/S — EXP. OF VJ — SCATTER

RUNS 233- 248, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.7	6.98	.28	88.8	7.53	.13	91.0	7.76	.40	92.6	7.40	.06	93.8	7.47	.28
630	80.3	7.13	.26	86.4	8.40	.15	87.5	8.38	.17	89.2	7.95	.21	90.3	8.12	.11
1250	76.6	8.10	.36	82.8	9.23	.19	85.2	9.85	.14	86.5	9.19	.17	86.0	9.88	.21
2500	70.1	8.73	.32	77.4	9.91	.27	80.6	10.*	.09	81.3	10.*	.10	82.7	10.*	.19
5000	60.6	7.97	.36	69.6	9.06	.09	74.8	9.49	.09	77.2	9.63	.08	78.2	9.77	.04
OASPL	95.8	4.85	.17	101.2	6.02	.05	103.1	6.05	.12	104.1	6.46	.04	104.5	6.88	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.8	6.43	.39	92.6	6.90	.29	91.8	7.20	.06	88.7	6.43	.32	79.7	7.43	.13	86.7	7.38	.46
630	89.3	6.80	.48	88.6	7.46	.30	89.3	8.21	.32	83.8	7.03	.53	75.9	6.74	.10	80.4	7.88	.46
1250	84.9	8.40	.28	84.7	8.56	.19	86.0	9.32	.19	81.0	7.73	.61	71.5	7.03	.15	72.4	8.37	.28
2500	81.8	9.10	.21	81.9	8.90	.19	82.8	9.71	.20	77.7	8.08	.47	66.8	8.19	.14	67.2	9.24	.19
5000	77.1	8.64	.16	77.3	8.98	.23	81.1	10.*	.16	72.7	8.27	.51	59.2	7.87	.18	59.2	8.64	.08
OASPL	103.3	5.51	.26	102.5	6.20	.20	103.3	7.13	.08	98.7	6.69	.45	96.4	6.83	.21	99.6	7.17	.04

RUNS 233- 248, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.7	7.52	.26	87.2	8.19	.30	88.4	7.63	.18	89.8	7.24	.28	89.7	7.46	.41
630	77.7	8.09	.29	83.3	8.78	.39	86.8	8.83	.28	86.2	8.41	.32	85.3	8.46	.26
1250	73.1	8.89	.09	78.2	9.36	.44	82.5	9.44	.44	82.8	9.72	.49	82.6	9.28	.66
2500	65.5	8.87	.12	72.7	9.74	.34	77.8	9.70	.88	79.9	10.*	.77	80.4	9.87	.58
5000	56.9	8.61	.21	65.6	8.70	.40	72.4	9.59	.39	75.1	9.66	.68	76.5	9.71	.62
OASPL	95.9	5.91	.17	99.0	6.40	.28	100.7	6.73	.17	100.7	6.84	.43	100.3	6.98	.41

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.4	7.39	.06	87.7	6.73	.02	86.6	7.25	.30	83.3	4.63	.46	88.3	7.74	.35	90.0	7.29	.06
630	85.1	8.11	.08	83.2	7.61	.24	84.6	8.22	.39	78.8	3.76	.08	83.4	7.72	.30	84.7	7.13	.17
1250	82.9	9.48	.09	81.1	8.09	.25	82.2	8.84	.35	74.0	3.83	.43	77.9	7.99	.26	77.0	7.98	.43
2500	80.7	9.96	.16	79.8	9.16	.07	80.2	9.85	.42	70.1	3.79	.55	73.6	8.46	.52	71.7	8.22	.27
5000	76.5	9.93	.17	75.1	8.61	.33	78.8	9.84	.42	65.4	3.38	.77	67.8	8.12	.62	64.9	7.75	.13
OASPL	99.9	6.57	.07	98.5	6.01	.38	99.9	7.37	.84	97.0	5.07	.48	102.3	7.78	.56	102.6	7.18	.13

RUNS 254- 261, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.6	7.71	.48	91.8	7.80	.30	95.3	6.92	.22	97.5	7.51	.18	98.6	7.54	.23
630	83.7	7.76	.54	89.3	8.59	.11	92.1	8.03	.40	94.9	8.64	.27	94.4	8.65	.27
1250	78.9	8.54	.33	84.3	9.85	.31	86.6	9.08	.10	88.2	9.55	.26	88.7	9.43	.23
2500	72.2	8.86	.13	78.8	9.77	.21	81.1	8.83	.32	83.9	9.94	.15	84.8	9.30	.22
5000	64.2	8.41	.39	72.8	9.44	.06	75.7	8.83	.32	79.7	9.53	.09	80.9	9.21	.16
OASPL	99.3	5.87	.41	104.0	6.35	.15	106.2	5.68	.33	107.4	6.48	.15	108.0	6.64	.13

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.9	6.61	.22	97.8	6.81	.19	95.2	6.50	.27	92.5	7.74	.26	84.6	7.43	.32	78.3	7.00	.18
630	92.7	7.80	.20	91.6	7.33	.25	91.4	8.34	.21	87.6	7.44	.20	82.1	7.63	.43	75.9	6.83	.52
1250	87.6	9.00	.22	87.2	8.81	.11	86.5	9.12	.43	83.4	7.78	.19	79.4	8.49	.53	73.7	9.80	.70
2500	84.9	9.59	.31	84.4	9.38	.19	83.2	9.52	.16	80.8	8.22	.33	76.9	9.15	.51	74.2	13.*	1.56
5000	80.4	9.12	.30	80.6	9.35	.38	80.6	9.29	.18	77.2	8.27	.49	71.9	8.78	.64	59.7	11.*	1.44
OASPL	106.7	5.78	.16	106.3	6.18	.22	106.0	6.59	.28	105.8	7.84	.28	101.8	7.70	.38	95.6	6.07	.26

RUNS 254- 261, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.8	7.94	.23	87.2	7.86	.08	89.6	7.55	.12	91.0	7.24	.36	91.5	6.97	.45
630	79.2	8.20	.07	84.2	8.36	.24	85.8	8.13	.23	87.6	8.25	.47	88.2	8.14	.43
1250	75.2	8.98	.20	80.4	9.19	.14	82.9	8.98	.28	83.8	9.11	.26	84.9	9.41	.26
2500	68.7	9.19	.14	75.7	9.80	.24	79.0	9.67	.11	80.0	9.05	.51	81.4	9.37	.31
5000	60.6	8.75	.27	68.6	8.95	.39	72.8	9.04	.38	76.5	9.04	.38	77.9	9.75	.42
OASPL	95.7	6.17	.21	99.4	6.12	.18	102.2	6.04	.17	102.7	6.23	.19	103.2	6.30	.27

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.2	6.90	.44	91.1	7.00	1.34	90.1	9.16	.78	87.8	8.78	.48	77.7	6.61	.27	85.9	6.99	.44
630	88.2	7.71	.48	87.1	7.48	.82	87.6	9.48	.77	85.8	8.74	.45	74.2	7.15	.15	79.3	7.74	.29
1250	84.1	8.84	.44	83.7	8.45	.33	83.5	8.98	.26	82.6	9.49	.34	68.7	6.81	.27	70.4	7.37	.43
2500	81.8	9.18	.37	81.0	8.39	.46	80.2	9.28	.47	80.1	10.*	.32	64.7	6.84	.22	64.9	7.31	.24
5000	77.6	8.96	.25	77.1	8.34	.04	78.0	9.30	.50	76.1	10.*	.51	58.7	6.90	.26	57.6	7.81	.36
OASPL	102.1	6.15	.34	101.7	6.66	.72	101.9	8.07	.40	101.5	8.76	.42	96.7	6.09	.20	98.6	6.71	.43

TABLE A-I.- CONTINUED.

ORIGINAL PAGE IS OF POOR QUALITY

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 262- 269, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	89.1	6.38	.18	94.1	5.62	.14	99.0	6.10	.13	99.7	5.37	.44	98.9	5.81	.50
630	88.9	6.10	.13	91.1	6.50	.40	93.7	6.58	.18	96.0	6.63	.34	94.8	6.48	.29
1250	81.3	7.93	.20	86.0	8.85	.33	88.4	8.64	.08	89.1	8.81	.39	89.7	8.78	.13
2500	74.1	8.97	.10	80.8	9.45	.20	82.9	9.39	.18	88.1	9.89	.30	85.8	9.53	.08
5000	68.2	8.04	.33	73.1	8.28	.30	78.9	8.16	.16	79.8	8.86	.21	81.0	9.05	.06
OASPL	100.2	4.74	.24	105.6	5.44	.36	108.2	5.18	.14	108.8	5.10	.33	108.9	5.18	.23

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	100.2	5.84	.43	99.2	6.06	.11	95.6	5.28	.17	91.3	6.22	.18	84.9	7.44	.57	80.9	5.18	.18
630	93.8	6.88	.28	92.4	6.87	.13	90.6	6.68	.28	87.4	6.38	.33	80.9	7.80	.31	76.3	5.98	.20
1250	88.6	8.77	.14	88.2	8.83	.10	87.2	8.97	.10	84.1	7.73	.28	78.8	9.96	.13	71.0	6.80	.48
2500	88.8	9.51	.23	85.4	9.59	.12	84.0	9.34	.11	81.2	8.21	.25	74.4	10.*	.28	64.4	7.00	.39
5000	80.9	9.01	.41	81.3	9.86	.22	80.8	8.85	.17	77.3	8.54	.41	69.3	9.94	.52	56.9	6.93	.53
OASPL	106.8	8.43	.24	107.8	8.69	.04	106.4	8.81	.16	104.8	7.01	.18	98.6	7.86	.33	97.0	5.58	.07

RUNS 262- 269, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	84.2	6.75	.16	88.1	6.11	.41	90.9	6.40	.41	94.3	8.19	.21	93.9	7.19	.09
630	81.7	6.71	.35	87.0	7.27	.23	88.2	7.10	.32	91.7	8.82	.21	90.9	7.80	.18
1250	77.3	8.09	.30	83.7	8.97	.18	85.9	8.80	.27	87.1	9.91	.04	86.8	9.16	.17
2500	70.8	8.79	.17	77.9	9.54	.34	80.9	9.72	.13	83.2	11.*	.18	83.7	10.*	.34
5000	61.6	8.06	.21	69.9	8.69	.30	73.9	8.77	.07	79.1	10.*	.03	79.4	10.*	.18
OASPL	96.1	4.82	.17	100.7	8.07	.29	103.2	8.14	.22	105.0	6.64	.14	104.7	8.10	.03

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.8	5.11	.59	89.8	4.41	.97	88.3	5.56	.48	88.9	5.83	.86	79.8	6.27	.28	85.2	6.82	.09
630	87.6	5.16	.65	86.9	6.01	.39	85.9	5.94	.40	84.7	6.60	.96	77.7	7.47	.39	80.3	6.84	.35
1250	84.4	8.04	.07	84.5	8.30	.22	83.2	7.60	.38	81.0	7.49	.87	73.8	8.34	.28	78.6	6.99	.28
2500	82.7	9.43	.24	82.4	9.22	.26	80.7	8.45	.48	77.7	7.77	.86	68.6	8.58	.10	67.3	7.48	.40
5000	78.2	8.85	.17	78.6	8.93	.21	77.9	7.98	.36	73.4	7.42	.86	63.3	9.19	.41	59.6	7.13	.51
OASPL	101.9	4.87	.22	101.2	8.08	.39	100.4	5.48	.87	98.6	6.28	.57	96.8	8.78	.49	99.8	6.77	.29

RUNS 271- 278, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.7	7.60	.18	87.6	8.31	.28	90.4	8.12	.11	92.1	8.50	.23	93.1	8.31	.10
630	80.1	8.02	.23	84.4	8.13	.23	87.9	8.47	.37	90.5	8.92	.14	90.7	8.83	.23
1250	76.3	8.59	.11	81.7	9.11	.13	84.9	8.84	.30	86.8	8.67	.18	88.1	9.17	.19
2500	71.9	8.58	.33	78.3	9.10	.26	81.6	8.97	.07	84.0	9.25	.28	85.2	9.02	.19
5000	68.9	8.46	.28	73.4	8.76	.39	77.0	8.86	.13	80.9	9.20	.21	82.0	9.30	.22
OASPL	99.1	6.38	.12	103.1	7.03	.21	104.7	6.97	.17	105.3	7.58	.29	106.4	7.60	.40

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	94.3	8.69	.21	94.3	8.51	.23	94.3	9.16	.18	95.1	9.29	.44	84.7	7.75	.24	77.2	7.88	.92
630	91.6	8.79	.26	91.4	8.51	.23	92.0	8.90	.11	88.2	7.91	.40	82.6	7.67	.37	76.2	9.13	1.35
1250	88.7	8.92	.14	87.6	8.22	.34	87.8	8.98	.20	84.1	8.43	.32	79.3	7.98	.23	76.0	10.*	1.28
2500	86.5	9.18	.09	85.0	8.27	.28	84.3	8.86	.13	81.3	8.75	.34	76.2	7.99	.29	75.6	11.*	1.76
5000	82.9	9.31	.25	81.6	8.42	.22	82.3	9.11	.26	77.6	8.60	.60	72.0	7.93	.14	57.8	9.86	.06
OASPL	104.9	7.67	.03	104.6	7.70	.28	105.8	8.96	.09	107.0	9.04	.34	103.2	7.61	.49	97.2	7.07	.39

RUNS 271- 278, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	80.7	8.13	.23	84.2	7.51	.18	87.0	7.98	.17	88.7	8.33	.28	89.8	8.54	.27
630	76.9	7.80	.30	81.9	8.25	.11	84.3	8.20	.18	86.5	8.68	.34	87.1	8.49	.42
1250	73.7	8.46	.28	78.1	8.81	.21	81.6	8.91	.06	83.1	9.06	.35	84.3	8.92	.34
2500	69.1	8.92	.14	74.8	8.71	.13	78.8	9.54	.18	80.2	9.03	.40	81.6	9.08	.23
5000	62.3	8.61	.34	70.0	8.70	.24	74.3	9.05	.09	77.7	9.22	.24	78.3	9.43	.43
OASPL	95.2	6.32	.32	99.1	8.41	.23	101.6	6.55	.24	101.9	7.13	.22	102.5	7.82	.28

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.1	8.11	.28	91.2	8.65	.15	89.8	9.44	.80	83.6	6.43	2.02	74.8	6.88	.03	81.4	7.67	.66
630	87.0	7.77	.10	87.1	8.61	.09	85.6	7.81	.60	82.1	7.18	2.43	70.4	6.02	.14	74.7	6.85	.63
1250	84.1	8.21	.31	84.2	9.04	.15	82.6	8.16	.21	79.8	7.93	2.41	66.8	6.36	.11	68.4	6.56	.43
2500	81.8	8.56	.45	81.3	8.47	.02	79.8	8.30	.27	77.8	8.79	2.51	63.8	6.01	.21	65.0	7.28	.86
5000	78.4	8.64	.32	77.8	8.33	.08	78.0	8.34	.21	74.4	9.08	2.62	59.6	6.32	.40	58.3	7.48	.36
OASPL	101.5	7.13	.31	101.6	7.79	.16	101.6	8.41	.48	100.7	8.37	1.24	95.9	8.15	.36	98.1	7.01	.44

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT — SPL, 250 M/S — EXP. OF VJ — SCATTER

RUNS 279- 286, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ. 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.8	7.43	.07	92.9	6.80	.09	97.0	6.51	.21	98.1	6.55	.09	98.8	6.29	.02
630	85.6	7.19	.16	90.5	7.38	.21	93.2	6.92	.23	96.2	8.08	.20	94.8	6.73	.16
1250	81.2	7.85	.04	86.2	8.48	.17	89.2	8.62	.12	90.0	9.14	.39	90.2	8.88	.28
2500	75.6	7.09	.10	82.0	8.08	.10	84.5	7.87	.32	86.2	8.82	.21	86.6	8.16	.20
5000	69.5	7.89	.07	76.4	8.05	.12	80.1	8.32	.04	83.7	9.38	.44	83.9	8.74	.18
OASPL	100.0	5.42	.16	104.4	5.77	.11	107.2	5.42	.18	108.3	6.30	.17	108.3	5.69	.02

MID FREQ. 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.5	6.75	.15	98.2	6.02	.14	94.8	5.24	.18	92.6	7.62	.16	85.7	7.20	.38	79.8	6.49	.10
630	94.1	6.64	.28	92.1	6.37	.38	91.2	7.02	.29	88.7	7.61	.09	84.1	7.87	.48	78.2	6.01	.58
1250	89.6	8.66	.03	88.2	8.12	.33	86.6	7.89	.31	84.7	8.39	.17	80.8	8.84	.59	76.4	5.27	1.71
2500	87.1	8.48	.21	86.5	7.89	.27	84.0	8.09	.51	82.2	8.43	.14	76.6	7.96	.48	76.7	6.01	4.18
5000	83.9	8.74	.13	82.6	8.38	.18	82.0	8.48	.40	78.4	8.88	.18	72.1	8.39	.53	61.1	8.05	2.68
OASPL	107.9	5.83	.27	106.9	5.83	.19	106.2	5.93	.21	105.7	7.67	.17	102.1	7.81	.28	97.4	6.38	.13

RUNS 279- 286, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ. 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.7	7.48	.39	87.4	7.50	.31	90.3	7.39	.38	91.7	7.51	.18	91.9	6.86	.33
630	79.8	6.57	.07	85.7	7.93	.15	86.9	7.82	.03	88.2	7.19	.26	88.0	7.76	.36
1250	76.9	7.85	.04	82.6	8.79	.21	84.6	8.64	.15	84.9	8.59	.11	85.3	8.88	.19
2500	72.3	6.75	.26	78.4	7.99	.29	81.3	8.34	.21	82.8	8.90	.11	82.9	8.26	.18
5000	64.6	7.14	.09	72.9	8.45	.15	77.1	8.78	.28	79.3	8.51	.28	79.6	8.65	.33
OASPL	95.7	5.22	.07	100.0	6.11	.20	102.5	5.99	.21	103.4	6.33	.11	103.7	6.47	.28

MID FREQ. 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.7	6.68	.11	91.3	6.46	.09	89.7	7.48	.37	88.3	7.41	.18	79.1	7.28	.37	88.6	7.77	1.04
630	89.0	7.27	.11	87.6	7.26	.07	87.8	7.90	.31	86.4	7.53	.08	76.2	7.14	.70	79.8	8.38	1.17
1250	84.5	7.90	.06	84.2	8.24	.12	84.4	8.91	.45	82.8	8.00	.08	72.3	7.86	.71	72.1	8.18	1.04
2500	82.9	8.06	.32	82.4	8.57	.16	81.8	9.40	.12	80.4	8.35	.23	69.0	7.98	.64	67.1	7.47	.81
5000	79.7	8.80	.15	78.4	8.52	.12	78.9	9.17	.23	76.0	8.35	.26	63.1	7.78	.83	61.7	9.08	.78
OASPL	102.6	5.72	.16	101.6	6.03	.09	101.8	6.92	.09	101.2	7.60	.16	96.5	7.07	.88	98.4	7.48	1.11

RUNS 287- 294, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ. 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.7	6.40	.41	92.8	6.64	.25	96.6	6.85	.28	98.4	6.15	.25	99.4	5.93	.42
630	85.1	6.77	.27	89.9	7.05	.39	92.7	6.80	.23	95.5	7.32	.13	95.0	6.88	.39
1250	79.9	8.08	.10	85.1	8.86	.33	87.8	8.75	.21	88.3	8.85	.20	88.3	8.28	.41
2500	72.5	7.74	.23	79.2	8.31	.13	81.8	8.46	.13	83.8	8.87	.03	84.8	8.83	.21
5000	64.4	6.86	.27	72.6	7.34	.25	76.1	7.51	.14	79.1	7.95	.29	80.0	8.04	.22
OASPL	99.7	4.74	.15	104.4	5.49	.15	107.1	8.13	.20	108.0	5.36	.17	108.2	5.29	.28

MID FREQ. 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.8	5.56	.03	98.4	5.88	.23	95.1	5.37	.44	92.8	7.11	.12	85.7	7.87	.54	79.0	5.30	.37
630	93.6	6.47	.23	92.5	7.09	.23	91.5	6.96	.28	88.1	7.18	.09	83.7	8.82	.19	76.8	6.78	.71
1250	89.1	8.24	.31	87.8	8.93	.12	86.4	7.95	.29	84.2	7.94	.17	80.8	9.40	.42	74.8	7.82	1.36
2500	84.9	8.29	.22	84.8	8.97	.18	83.3	8.46	.13	81.1	7.80	.11	76.5	9.02	.31	72.7	10.*	2.39
5000	80.0	7.84	.13	80.3	8.57	.23	80.4	8.34	.41	77.2	7.98	.13	71.8	8.84	.44	58.5	9.32	1.37
OASPL	107.4	5.09	.12	106.8	5.69	.14	106.0	5.49	.17	105.6	7.44	.14	101.5	7.72	.47	96.5	5.74	.17

RUNS 287- 294, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ. 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.6	8.03	.20	87.6	7.73	.30	90.1	7.59	.34	92.0	7.72	.30	92.7	7.62	.40
630	80.1	7.94	.23	85.4	8.58	.16	87.1	8.73	.30	88.9	8.63	.25	89.5	8.52	.10
1250	76.1	9.25	.39	82.1	9.45	.37	84.5	9.54	.30	85.1	9.70	.45	88.3	9.21	.48
2500	69.9	9.08	.10	77.1	9.97	.22	80.0	10.*	.46	81.6	10.*	.31	82.4	10.*	.48
5000	62.0	8.58	.16	70.0	8.57	.15	74.0	9.33	.36	77.4	9.52	.41	78.0	9.73	.34
OASPL	96.5	6.12	.21	100.3	6.38	.16	103.0	6.19	.24	103.9	6.64	.27	104.1	6.64	.15

MID FREQ. 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.5	7.70	.51	91.3	6.56	.09	89.3	7.40	.48	86.3	6.65	.62	79.0	6.67	.16	88.6	8.42	.43
630	89.1	7.99	.26	87.9	7.51	.24	87.2	7.86	.50	85.1	7.40	.93	76.1	6.77	.30	81.9	8.49	.42
1250	84.6	8.88	.28	84.7	8.69	.40	84.4	9.03	.20	82.4	8.67	1.10	71.3	7.36	.47	73.4	8.93	.80
2500	83.0	10.*	.23	82.3	9.08	.23	81.6	9.69	.25	79.6	9.24	1.18	67.1	7.73	.30	67.4	8.89	.43
5000	78.5	9.79	.35	78.1	8.85	.10	78.6	9.65	.16	74.7	8.84	1.28	61.0	7.24	.77	59.7	9.19	.38
OASPL	103.4	6.83	.24	102.0	8.13	.18	101.6	7.21	.52	100.2	7.68	.57	95.6	6.05	.38	100.8	8.25	.35

TABLE A-I.- CONTINUED.

RUNS 296- 299, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	86.6	5.94	.98	91.9	7.94	.39	96.6	6.96	.28	98.8	6.73	.96	96.9	6.57	.22
630	85.0	8.26	.47	88.6	6.05	.67	93.8	8.37	.34	97.7	9.73	.25	93.2	8.45	.15
1250	78.5	8.75	1.21	83.6	8.92	1.05	88.7	9.31	1.19	89.0	8.92	.58	88.6	11.*	.80
2500	70.9	8.73	.76	78.8	10.*	.26	81.5	8.35	.59	84.2	9.66	.43	84.0	11.*	.61
5000	58.7	6.64	.46	67.7	8.99	.30	75.7	8.04	.83	77.7	9.07	.63	77.9	10.*	.91
OASPL	98.7	4.80	.38	103.5	5.77	.11	107.6	5.38	.20	109.5	6.77	.23	107.3	6.93	.42

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.2	6.52	.28	98.2	8.80	.83	93.0	3.85	.56	93.3	8.47	.37	84.0	6.49	.90	79.4	5.03	.85
630	94.9	7.67	.75	91.4	7.40	1.06	90.7	7.57	.31	89.7	9.08	.41	81.6	8.17	.28	74.8	7.89	.07
1250	86.9	8.80	.27	86.1	8.94	.83	85.3	8.37	1.22	85.5	9.61	.38	78.1	7.56	.32	69.4	7.94	.17
2500	85.2	10.*	.73	83.2	9.18	.14	81.7	8.90	1.26	81.4	8.87	.13	76.3	8.80	.38	63.4	7.43	.54
5000	79.2	9.35	.81	76.8	5.81	.21	77.2	8.65	1.21	73.7	8.26	.63	70.3	8.99	.34	54.3	7.65	.88
OASPL	108.0	6.00	.37	105.8	6.27	.07	105.2	5.85	.04	105.3	7.97	.09	100.8	7.66	.30	96.1	5.82	.56

RUNS 300- 307, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	86.6	5.47	.56	92.2	7.78	.57	96.0	6.59	.46	96.6	5.07	.47	97.9	7.66	.56
630	85.4	8.35	.59	88.1	5.73	.38	95.3	8.70	.94	96.8	8.41	.58	92.7	7.38	.04
1250	77.8	6.52	.65	83.1	8.67	.10	88.5	8.56	1.21	88.0	7.31	.42	89.0	10.*	.49
2500	72.0	6.75	.16	78.1	8.64	.48	82.5	6.65	.61	83.3	7.19	.65	84.9	10.*	.60
5000	62.7	3.27	.43	73.0	6.60	.43	77.1	4.17	.60	80.9	7.40	.35	78.3	6.87	.35
OASPL	98.8	5.08	.30	103.3	8.16	.19	106.9	4.95	.50	108.4	5.60	.39	107.0	6.18	.49

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.8	6.57	.79	97.7	7.08	.26	93.2	4.17	.50	93.7	7.52	.12	86.7	8.76	.47	78.2	4.69	.57
630	94.7	7.09	.74	89.5	5.27	.66	90.6	7.59	.57	89.2	7.61	.13	81.9	6.86	.43	73.7	7.15	.11
1250	90.0	9.30	.62	84.5	6.77	.47	84.4	6.35	.35	85.2	9.50	.40	78.1	7.54	.48	69.7	7.81	.50
2500	86.7	9.52	.82	82.2	7.07	.21	80.9	6.63	.34	82.0	9.47	.60	76.2	8.49	.27	63.5	7.68	.31
5000	81.1	7.18	.69	75.4	5.28	.73	76.3	6.21	.15	73.6	5.91	.55	69.6	7.02	.60	57.8	7.37	.46
OASPL	107.7	5.99	.16	105.2	5.82	.22	104.6	5.51	.05	104.8	7.52	.20	101.1	7.99	.17	95.5	6.33	.38

RUNS 300- 307, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.9	9.08	.76	86.0	8.47	.25	92.3	8.73	.58	91.6	7.22	.93	90.7	7.50	1.06
630	78.1	6.76	.23	86.6	9.45	.75	88.1	9.09	.62	91.6	8.84	.27	88.9	9.30	.13
1250	73.6	8.68	.18	80.7	8.31	.66	84.6	9.51	.37	86.8	9.54	.57	85.0	9.17	.23
2500	67.9	7.23	.81	75.6	9.11	1.13	81.1	8.96	1.05	81.8	8.40	.66	79.8	9.34	.13
5000	61.5	5.66	.73	69.3	6.72	1.40	77.0	6.91	.73	79.6	8.70	.77	78.1	8.81	.63
OASPL	95.0	5.92	.23	98.4	6.49	.17	103.3	6.35	.53	104.2	6.87	.21	101.4	6.56	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.5	6.52	.46	85.9	6.97	.87	85.6	6.52	.29	87.0	9.45	.52	79.4	7.31	1.07	88.2	7.30	.68
630	85.9	7.01	.31	84.8	8.49	.74	84.5	7.23	.81	84.4	7.86	.77	77.9	9.31	.69	79.7	5.66	1.08
1250	84.3	8.59	.89	81.1	8.35	.72	80.1	8.39	.13	82.2	5.64	.84	73.7	9.47	.43	73.7	5.29	3.56
2500	81.9	9.78	.55	77.6	7.19	.29	76.8	8.36	.24	75.6	6.24	.28	66.2	7.09	.30	68.8	4.10	6.33
5000	77.3	8.14	1.01	74.4	8.63	.62	72.7	6.72	.58	71.3	9.03	.40	62.1	7.57	1.37	59.8	1.26	8.13
OASPL	100.7	5.38	.11	98.1	5.98	.09	99.0	6.66	.30	99.3	7.33	.23	96.4	7.11	.22	99.7	6.76	.66

RUNS 308- 315, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	80.8	6.01	1.00	83.7	6.79	.87	90.2	8.98	.24	89.7	6.67	.35	89.2	8.60	.28
630	79.4	5.69	.77	84.0	6.69	1.02	89.7	9.18	.32	91.5	8.33	.72	89.9	9.96	.32
1250	76.4	6.09	1.23	82.8	9.22	.25	85.4	8.42	.46	88.7	9.87	.50	85.5	8.46	.58
2500	72.0	7.00	1.39	76.3	5.69	.59	84.6	9.19	.44	83.3	6.86	.30	84.6	9.82	.45
5000	65.7	5.16	.70	73.3	6.09	.90	80.5	6.71	1.71	80.4	6.26	.56	78.4	5.95	.29
OASPL	97.1	6.69	.74	100.4	6.81	.71	104.1	6.51	.29	105.3	7.50	.28	102.3	7.56	.58

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.4	5.91	.42	90.4	6.65	.43	90.9	7.43	.69	96.0	10.*	.70	87.2	9.27	.37	75.3	7.56	.68
630	90.8	6.74	.55	89.0	7.54	.91	89.7	7.15	.68	88.2	6.34	.38	81.6	7.30	.60	69.6	4.24	.58
1250	88.8	8.26	.94	85.8	6.82	.37	86.4	8.97	.23	83.2	6.70	.78	76.9	7.98	.32	66.3	5.38	.55
2500	86.2	8.44	1.06	82.6	6.30	.45	83.0	8.74	.15	80.3	6.65	.22	75.6	7.85	.33	63.6	6.88	.22
5000	81.6	5.87	.92	77.7	5.38	.87	80.3	7.37	1.25	75.8	8.05	1.07	70.6	9.07	.22	56.8	5.20	1.04
OASPL	103.8	7.00	.08	102.2	7.34	.13	104.4	8.51	.23	106.6	9.07	.36	104.7	9.26	.35	96.1	8.70	.11

TABLE A-I.- CONTINUED.

RUNS 308- 315, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	77.9	7.62	1.43	83.4	9.48	.57	84.0	6.58	.59	88.5	9.45	.68	89.0	9.42	.87
630	78.1	8.00	.42	81.8	8.78	.54	83.6	7.10	.18	86.8	8.84	.35	86.3	8.57	.68
1250	74.6	9.50	.88	77.1	7.28	.18	85.5	10.*	.60	84.3	9.28	.45	84.1	9.38	.78
2500	67.4	6.60	.41	75.2	9.08	.67	80.5	7.23	.76	82.1	9.23	.83	79.8	9.09	.49
5000	61.5	5.93	.99	69.2	5.49	1.02	76.9	6.34	.85	79.2	9.17	.88	77.1	8.75	.59
OASPL	92.6	6.69	.56	95.9	6.73	.22	100.9	6.85	.28	101.8	7.60	.23	99.8	7.70	.19

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.6	8.97	.53	84.7	6.31	.39	85.3	8.42	.34	84.8	7.26	.07	77.3	9.12	.55	80.5	7.68	1.49
630	85.8	6.78	.57	84.6	8.68	.69	85.6	9.32	.19	80.1	7.49	.19	71.8	5.89	.18	74.5	6.99	1.26
1250	83.6	8.30	1.00	80.4	6.59	.50	81.4	8.92	.14	78.6	9.25	.47	70.3	7.96	.94	69.3	7.08	1.48
2500	81.4	8.34	.93	78.0	6.97	.40	80.4	8.80	.33	75.4	9.02	.60	68.7	5.92	.07	65.0	6.69	.54
5000	78.3	6.73	.02	75.4	8.80	.47	76.9	9.41	.81	67.8	5.97	.45	63.2	8.50	.82	58.7	5.82	.31
OASPL	100.9	7.55	.13	98.3	7.71	.18	99.5	8.07	.47	99.4	8.10	.31	97.3	7.26	.27	99.7	7.61	.52

RUNS 316- 323, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.7	8.46	.26	85.0	6.81	.83	90.5	9.32	.38	89.6	7.13	.37	90.8	10.*	.38
630	80.3	8.99	.34	84.3	8.03	.77	90.3	9.73	.61	89.3	7.34	.30	89.2	9.27	.92
1250	75.6	7.59	.81	82.8	8.86	.13	86.1	9.11	.26	88.7	9.23	.20	85.3	9.20	.30
2500	73.8	9.16	.18	78.8	7.39	.62	84.8	8.94	.26	83.8	9.58	.39	84.8	9.61	.07
5000	64.6	9.09	.88	70.5	7.44	.55	80.0	9.42	.93	81.5	9.73	.34	80.4	9.74	.28
OASPL	96.6	6.55	.60	100.4	6.80	.14	104.3	6.76	.35	105.2	7.74	.43	102.4	7.76	.38

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.8	6.67	.36	89.9	6.63	.42	91.4	9.08	.32	93.6	8.44	.61	85.0	7.74	.87	75.3	7.33	.11
630	91.6	8.78	.67	90.4	9.12	.76	90.3	9.09	.45	89.4	8.62	.69	82.3	8.56	.84	70.1	7.70	.62
1250	87.8	7.29	.40	85.8	8.21	.74	85.8	8.94	.36	85.3	9.61	.56	77.8	8.77	.28	64.4	5.42	.69
2500	86.1	9.59	.86	82.5	7.93	.64	82.5	8.98	.28	81.3	9.48	.43	76.6	9.13	.51	64.2	7.78	.75
5000	80.3	7.42	.21	76.8	6.82	.37	79.1	9.60	.24	74.0	7.19	.29	70.9	9.30	.48	54.8	6.73	.99
OASPL	103.5	7.11	.19	101.9	7.40	.22	104.4	8.73	.27	106.1	8.72	.27	102.0	8.08	.40	95.2	6.30	.16

RUNS 316- 323, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	79.6	7.04	.24	82.8	6.94	.22	88.7	8.98	.76	88.5	9.32	.61	87.9	8.85	.77
630	77.3	6.87	.22	85.3	9.74	.53	87.3	8.45	.15	86.6	8.94	.25	86.1	8.27	.89
1250	78.6	9.11	.26	83.5	10.*	.65	88.5	11.*	.27	87.9	10.*	.32	83.4	9.16	.23
2500	71.6	8.40	.15	79.5	9.36	.91	83.4	9.61	.38	84.8	10.*	.62	82.9	9.70	.65
5000	66.0	9.21	.60	73.3	10.*	.70	79.2	7.74	1.11	78.9	9.52	.41	77.3	9.37	.18
OASPL	93.3	6.77	.36	97.2	6.80	.10	101.9	7.48	.18	102.0	7.95	.09	99.5	7.83	.04

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.9	9.25	.47	89.1	9.17	1.06	86.2	8.81	.45	81.7	4.93	.91	73.9	6.21	.73	81.5	8.28	.19
630	88.2	9.06	.47	84.3	7.02	.10	85.4	8.89	.34	79.5	6.33	.33	73.2	7.46	.30	74.5	6.61	.71
1250	86.4	9.89	.52	83.8	8.76	.20	84.3	8.80	.33	78.1	6.35	.93	71.8	6.74	.27	71.5	6.75	.42
2500	83.5	8.63	.76	81.8	9.83	.73	80.0	8.09	.45	74.5	6.91	.82	65.3	5.62	.18	65.4	5.55	.60
5000	77.8	7.17	.33	75.6	9.42	.69	79.9	11.*	.41	67.9	6.57	.26	58.9	5.71	.26	59.3	7.10	.35
OASPL	101.3	7.65	.10	99.6	8.39	.43	100.0	8.37	.38	98.6	7.77	.22	94.5	6.39	.76	98.0	7.88	.35

RUNS 324- 331, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.9	7.23	.04	90.8	6.30	.65	96.9	7.04	.18	97.1	5.97	.62	97.0	6.87	.35
630	83.8	7.37	.11	91.4	9.01	.57	94.4	8.11	.84	96.9	9.22	.36	93.4	8.30	.27
1250	78.4	7.06	.31	83.0	9.47	.16	90.1	10.*	.80	88.9	8.77	.52	85.2	7.56	.56
2500	72.1	9.54	.74	77.5	9.53	.74	84.6	10.*	.75	83.5	8.87	.38	82.5	9.07	1.17
5000	64.4	8.05	.24	71.2	9.21	.35	78.4	8.43	1.03	77.7	9.09	.12	75.7	7.82	.38
OASPL	99.0	5.25	.20	103.4	8.34	.41	107.8	5.95	.22	108.3	6.21	.29	106.2	5.64	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.1	5.47	.38	97.5	8.33	.84	93.2	4.99	.72	92.7	7.50	.84	86.2	8.72	.58	79.0	5.54	.54
630	94.3	7.08	.86	91.4	7.37	1.25	89.4	7.05	.48	89.0	9.13	.55	81.8	7.03	.36	74.5	7.49	.50
1250	88.6	8.99	1.24	85.7	8.35	.70	85.1	7.42	.21	84.9	9.54	.49	81.4	9.32	.84	69.2	6.99	.86
2500	84.6	9.22	1.31	83.9	9.30	.13	82.4	8.02	.30	81.1	9.22	.90	75.9	8.88	.67	63.8	7.54	.67
5000	80.3	9.57	.01	77.8	9.52	.49	79.6	8.95	1.41	73.6	8.00	.65	69.7	9.19	.44	53.1	5.94	.42
OASPL	107.7	5.91	.35	108.4	6.04	.11	105.7	6.64	.22	105.1	7.90	.23	101.0	7.91	.27	96.1	5.97	.47

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 324- 331, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.7	9.21	.69	86.0	8.55	.29	92.3	8.97	.64	92.9	9.56	.48	90.4	6.96	.62
630	77.2	6.66	.35	85.8	8.56	.28	89.0	9.73	.61	89.1	7.45	.74	88.9	9.59	.56
1250	73.8	8.58	.76	81.7	9.41	.25	84.6	9.69	.24	87.1	10.*	.53	84.3	9.87	.83
2500	68.5	9.21	.15	76.0	9.85	.42	81.1	10.*	.73	83.1	11.*	.31	78.7	9.09	.54
5000	57.0	6.13	.40	65.5	6.86	.89	73.4	8.60	.21	74.2	8.47	.73	73.6	9.48	.37
OASPL	94.7	6.11	.12	98.2	6.32	.16	103.5	6.62	.43	103.7	7.01	.16	101.5	6.95	.26

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.8	7.25	.10	86.5	6.88	.82	85.4	6.32	.40	84.4	6.80	.17	78.9	7.63	.90	87.7	7.39	.94
630	87.9	8.10	.56	85.4	8.90	.54	84.9	8.58	.08	83.2	6.61	.77	77.0	9.60	.88	80.6	8.87	.40
1250	84.4	8.78	.89	80.7	6.99	.44	81.0	8.42	.34	79.4	6.90	.27	72.8	10.*	.56	73.4	7.75	.82
2500	81.0	8.86	.87	79.6	8.76	.64	78.2	8.09	.85	75.6	7.19	.70	66.3	9.08	.23	66.2	7.60	.38
5000	75.9	8.72	1.08	74.4	9.43	.43	76.0	8.78	.53	68.8	7.61	.22	59.4	8.13	.45	59.9	9.25	.63
OASPL	101.1	5.46	.23	98.2	5.92	.05	99.4	6.90	.17	99.0	7.56	.19	96.1	7.59	.65	99.9	7.17	.37

RUNS 336- 339, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	80.7	7.01	.22	84.8	7.33	.09	87.3	7.72	.06	89.4	7.88	.16	90.6	8.05	.08
630	79.7	7.36	.27	84.4	7.95	.22	85.6	7.42	.05	88.1	7.68	.11	88.1	7.80	.22
1250	77.7	8.28	.37	82.3	9.08	.17	84.8	8.65	.09	86.5	8.53	.09	87.1	8.72	.06
2500	73.3	6.39	.20	79.4	7.46	.30	81.7	7.42	.05	83.8	7.58	.18	84.8	7.78	.35
5000	69.2	6.48	.63	75.8	7.25	.56	80.4	7.33	.59	82.1	7.43	.20	82.2	7.86	.28
OASPL	96.0	5.85	.06	100.1	6.04	.12	101.9	6.33	.07	102.6	6.80	.14	102.6	6.82	.15

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.6	8.00	.23	92.0	8.57	.28	91.3	8.32	.38	93.1	9.35	.19	88.0	7.71	.38	.0	.00	.00
630	89.7	8.22	.42	90.4	8.77	.48	90.0	8.12	.26	88.4	8.40	.08	81.7	7.81	.20	.0	.00	.00
1250	87.5	8.59	.40	87.7	8.71	.31	87.7	8.86	.21	84.0	8.43	.15	78.8	8.22	.39	.0	.00	.00
2500	84.8	7.38	.24	85.2	8.21	.13	84.0	7.77	.09	81.1	8.44	.02	75.7	7.87	.37	.0	.00	.00
5000	82.1	6.85	.31	81.7	7.33	.55	82.5	7.92	.58	76.8	8.03	.23	70.6	8.46	.52	.0	.00	.00
OASPL	102.9	7.11	.22	102.8	7.58	.26	102.9	7.72	.10	105.0	9.38	.14	102.7	8.37	.33	.0	.00	.00

RUNS 340- 347, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	82.8	7.41	.25	85.7	7.92	.22	87.3	7.36	.33	89.2	7.78	.06	90.3	8.28	.08
630	79.4	7.79	.19	83.7	7.95	.04	85.4	7.99	.08	87.8	8.01	.17	88.8	8.88	.18
1250	77.9	9.01	.23	81.7	9.08	.10	84.6	8.91	.35	86.5	9.10	.16	86.3	8.73	.03
2500	72.7	9.01	.23	79.1	9.69	.16	81.7	9.56	.10	83.2	8.75	.49	83.9	9.35	.24
5000	64.9	8.69	.22	72.2	9.63	.22	76.4	9.21	.14	79.0	9.13	.39	79.4	9.49	.21
OASPL	97.0	5.88	.07	101.1	6.38	.05	102.2	6.48	.04	102.9	7.04	.10	102.7	7.33	.07

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.2	7.58	.14	91.5	8.40	.08	92.0	8.33	.12	93.2	8.86	.11	84.3	7.66	.21	.0	.00	.00
630	89.1	8.30	.05	89.5	8.41	.17	90.9	8.73	.18	87.9	8.43	.15	81.5	7.59	.32	.0	.00	.00
1250	87.3	8.91	.04	87.1	8.49	.07	87.4	8.57	.00	84.1	8.33	.14	78.6	7.81	.45	.0	.00	.00
2500	84.7	8.80	.19	84.4	8.70	.28	84.8	9.04	.02	80.9	8.67	.14	75.6	8.33	.37	.0	.00	.00
5000	79.8	8.70	.37	79.8	9.18	.17	80.4	9.07	.20	75.4	8.37	.21	69.2	8.42	.22	.0	.00	.00
OASPL	102.6	8.92	.11	102.2	7.31	.08	103.4	8.03	.04	104.6	8.87	.13	101.9	7.94	.20	.0	.00	.00

RUNS 340- 347, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	80.1	7.41	.11	83.2	7.78	.26	84.2	7.52	.44	85.8	7.51	.08	86.9	7.98	.07
630	76.4	7.56	.16	82.5	7.85	.13	82.8	7.39	.23	84.9	8.11	.28	85.0	8.16	.12
1250	75.1	8.16	.12	81.2	8.86	.26	84.0	9.32	.29	84.2	8.88	.24	84.0	8.80	.15
2500	70.9	8.33	.24	78.5	8.97	.39	81.4	9.32	.29	82.5	9.25	.09	82.2	9.07	.05
5000	62.5	8.33	.23	71.5	9.06	.28	76.6	9.27	.21	78.1	9.39	.06	78.1	9.80	.22
OASPL	92.9	5.46	.10	97.2	6.08	.10	99.1	6.36	.13	99.8	6.71	.10	99.8	6.93	.11

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	88.1	8.14	.20	87.9	8.12	.05	86.9	7.97	.31	81.9	5.83	1.34	75.4	7.80	.15	.0	.00	.00
630	85.9	8.23	.15	84.9	7.83	.23	85.3	7.89	.10	80.3	5.66	1.47	73.3	7.56	.36	.0	.00	.00
1250	83.3	8.08	.08	83.4	8.62	.25	83.0	8.37	.20	78.2	6.27	1.39	71.8	7.74	.38	.0	.00	.00
2500	81.7	8.92	.14	80.9	8.97	.11	80.7	9.19	.26	75.4	6.92	1.37	68.4	8.62	.53	.0	.00	.00
5000	77.7	9.22	.23	76.9	9.17	.15	77.4	9.34	.23	69.8	6.72	1.68	59.6	7.96	.59	.0	.00	.00
OASPL	99.6	8.94	.01	99.0	7.36	.11	99.6	7.82	.16	97.3	7.51	.77	94.7	7.11	.11	.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 348- 351, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.3	8.65	.13	88.9	7.91	.05	87.4	7.79	.20	89.2	8.28	.08	90.0	8.21	.18
630	82.7	9.40	.28	88.2	8.84	.13	86.9	7.96	.14	88.7	8.24	.20	88.4	7.92	.13
1250	81.6	9.74	.14	85.9	10.*	.49	86.8	9.20	.23	87.9	9.28	.24	87.5	8.76	.33
2500	76.9	9.73	.22	82.4	9.30	.27	84.0	9.27	.05	85.8	9.76	.18	85.8	9.84	.17
5000	68.4	8.91	.39	76.2	9.86	.38	79.2	8.70	.19	81.0	9.19	.26	80.8	8.99	.27
OASPL	97.1	6.57	.14	100.9	6.72	.24	102.1	6.73	.09	102.7	7.04	.23	103.3	7.10	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.2	7.93	.21	91.4	8.38	.12	91.4	8.28	.07	92.5	8.80	.40	84.7	7.40	.14	.0	.00	.00
630	89.7	8.07	.16	90.4	8.81	.09	90.5	8.26	.27	87.6	7.70	.25	82.7	8.12	.28	.0	.00	.00
1250	88.0	8.87	.22	88.0	8.67	.14	87.7	8.33	.13	84.1	8.38	.12	79.7	7.87	.14	.0	.00	.00
2500	86.1	8.98	.10	85.5	8.79	.28	85.3	9.03	.14	81.0	8.53	.11	76.0	7.82	.20	.0	.00	.00
5000	81.1	8.40	.08	80.9	8.86	.21	81.9	9.21	.29	76.0	8.84	.13	69.5	6.38	.19	.0	.00	.00
OASPL	102.6	7.20	.09	103.3	7.63	.11	103.1	7.86	.08	104.1	8.73	.20	101.3	7.40	.12	.0	.00	.00

RUNS 352- 359, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.4	7.03	.06	92.2	6.80	.19	95.3	6.76	.23	96.5	6.55	.13	96.9	6.36	.13
630	84.3	7.19	.11	89.5	7.06	.09	92.0	7.37	.11	94.4	7.30	.10	93.3	7.48	.31
1250	79.5	8.24	.20	84.6	8.61	.09	86.5	8.71	.19	87.8	8.02	.86	87.1	8.37	.12
2500	72.2	8.88	.10	79.1	9.07	.34	81.1	9.12	.26	83.8	9.63	.78	83.1	8.97	.33
5000	62.1	8.93	.20	70.3	7.44	.36	74.1	7.21	.29	76.7	8.18	.13	77.8	8.91	.05
OASPL	98.4	5.57	.12	103.1	5.77	.21	105.2	5.60	.06	106.1	5.91	.06	108.7	5.78	.03

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.6	7.11	.26	97.2	5.82	.23	95.3	6.24	.10	90.4	6.77	.18	83.5	6.21	.36	.0	.00	.00
630	93.2	6.97	.44	91.2	6.54	.16	90.6	7.03	.16	86.6	7.26	.13	81.4	6.88	.26	.0	.00	.00
1250	87.8	9.02	.17	86.7	8.59	.39	87.3	9.10	.22	83.2	8.06	.14	78.7	7.13	.08	.0	.00	.00
2500	84.4	9.66	.34	83.1	8.72	.34	82.9	8.90	.13	79.7	8.34	.15	74.8	7.56	.16	.0	.00	.00
5000	78.2	8.36	.48	77.3	7.88	.31	75.7	8.55	.11	74.2	8.13	.26	68.1	7.54	.15	.0	.00	.00
OASPL	106.7	6.24	.23	105.2	5.68	.18	105.2	6.06	.18	103.3	7.50	.17	99.1	6.86	.26	.0	.00	.00

RUNS 352- 359, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.9	7.63	.41	86.1	7.29	.03	87.8	6.96	.09	88.6	6.84	.03	89.6	6.86	.30
630	78.4	7.68	.10	84.7	8.41	.26	85.2	8.09	.09	87.0	7.78	.06	86.9	8.17	.11
1250	74.3	8.77	.12	81.3	9.04	.02	83.4	9.04	.09	84.2	8.92	.19	83.9	8.96	.13
2500	66.3	8.54	.23	75.8	9.73	.21	78.3	9.69	.14	80.0	9.38	.37	80.4	9.96	.04
5000	55.3	8.24	.32	66.5	8.02	.15	71.4	8.18	.07	74.3	8.90	.22	74.3	9.02	.04
OASPL	93.7	5.63	.06	98.2	6.02	.15	100.1	5.89	.05	100.9	6.22	.05	100.8	6.23	.09

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.0	6.94	.13	89.6	6.93	.16	87.9	7.31	.50	84.4	6.05	.81	78.3	6.17	.46	.0	.00	.00
630	87.3	7.81	.15	86.0	7.36	.08	85.9	7.23	.36	82.4	6.86	1.46	76.4	7.26	.32	.0	.00	.00
1250	83.6	8.90	.18	83.8	8.88	.15	83.8	8.91	.22	80.1	7.88	1.32	72.8	7.67	.18	.0	.00	.00
2500	80.7	9.59	.07	80.8	9.33	.12	80.3	9.30	.17	76.3	8.05	1.39	67.7	8.02	.13	.0	.00	.00
5000	75.1	8.97	.16	74.8	8.51	.27	76.7	9.53	.09	70.4	7.90	1.40	59.1	7.05	.62	.0	.00	.00
OASPL	100.6	6.20	.10	99.7	6.30	.10	99.7	6.78	.28	97.8	7.03	.60	95.2	6.74	.16	.0	.00	.00

RUNS 406- 409, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.7	7.38	.04	93.0	7.12	.27	96.2	6.51	.35	98.0	6.87	.30	99.3	7.59	.10
630	84.2	7.43	.07	90.1	7.60	.18	92.6	7.26	.23	95.2	7.62	.09	94.7	7.90	.10
1250	80.1	8.69	.16	84.9	9.07	.21	87.6	8.98	.26	89.2	9.27	.65	88.8	9.60	.20
2500	73.4	9.88	.38	79.2	9.92	.19	82.5	9.54	.18	83.6	8.93	1.26	84.6	9.79	.16
5000	64.3	9.39	.26	70.9	8.92	.22	75.6	8.51	.02	77.5	8.29	.99	78.9	9.18	.08
OASPL	99.6	5.58	.09	104.0	6.05	.12	106.6	5.59	.11	107.4	6.15	.04	107.5	6.37	.10

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.1	7.00	.20	98.4	6.34	.15	95.3	5.68	.07				86.0	7.19	.14	78.4	6.94	.30
630	93.9	7.79	.03	93.1	7.46	.08	91.0	6.91	.04				84.0	7.90	.10	73.8	7.53	.37
1250	88.6	9.34	.22	89.0	9.15	.18	87.6	8.33	.11				81.1	8.76	.45	72.0	10.*	.65
2500	84.9	9.72	.30	85.3	9.72	.15	84.0	9.12	.11				77.2	9.10	.17	68.9	12.*	1.16
5000	78.8	8.91	.19	79.0	8.50	.55	80.1	8.78	.16				71.4	9.11	.17	62.6	12.*	2.16
OASPL	107.7	6.36	.18	106.9	6.10	.11	105.7	5.89	.05				101.7	7.77	.05	93.4	5.57	.02

TABLE A-I.- CONTINUED.

RUNS 423- 426, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.1	7.63	.33	91.9	7.14	.17	96.6	6.67	.17	97.1	5.95	.21	98.3	6.19	.08
630	85.3	7.63	.28	89.7	7.37	.05	92.4	7.27	.11	94.7	7.04	.18	94.1	6.99	.13
1250	80.5	8.74	.22	84.5	8.82	.16	87.7	9.15	.29	89.5	9.16	.73	88.7	8.92	.26
2500	73.4	9.15	.41	78.7	9.23	.40	82.3	9.00	.38	84.4	7.72	.94	84.6	9.10	.38
5000	64.4	7.12	.17	70.3	7.37	.46	76.2	7.44	.36	78.3	8.66	.53	79.5	8.24	.45
OASPL	99.6	5.49	.22	103.8	5.97	.01	106.7	5.86	.16	107.1	5.50	.13	107.1	5.53	.15

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.4	6.23	.24	98.0	5.63	.17	95.1	5.39	.07	92.1	7.73	.60	84.8	7.31	.28	.0	.00	.00
630	93.4	6.94	.12	93.3	7.04	.02	90.9	6.98	.21	88.4	7.94	.25	82.4	7.43	.48	.0	.00	.00
1250	88.4	8.91	.19	89.2	8.19	.21	87.3	8.46	.09	84.9	8.54	.46	79.9	8.22	.19	.0	.00	.00
2500	84.9	9.04	.38	85.8	7.76	.40	83.4	8.62	.34	81.7	8.73	.47	76.4	8.60	.29	.0	.00	.00
5000	80.1	8.47	.36	81.4	5.11	.21	80.0	8.53	.34	77.5	8.44	.46	70.7	8.80	.28	.0	.00	.00
OASPL	107.3	5.72	.18	107.2	5.82	.04	105.9	6.24	.21	105.4	7.95	.41	100.6	7.53	.13	.0	.00	.00

RUNS 427- 430, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.4	7.23	.07	91.9	7.18	.25	96.4	6.77	.24	97.7	6.55	.30	98.3	6.44	.05
630	85.0	7.54	.15	89.6	7.34	.16	92.9	8.04	.24	95.2	7.57	.12	94.0	7.01	.15
1250	80.1	8.40	.20	84.8	9.11	.14	87.7	9.00	.38	87.7	7.65	.67	88.9	9.01	.23
2500	72.4	6.48	.37	78.4	6.99	.57	82.0	6.46	.71	83.5	6.27	.61	84.0	5.56	.74
5000	64.6	4.10	.14	70.5	4.25	.49	76.3	3.50	.55	77.6	3.82	.54	79.3	3.77	.68
OASPL	99.4	5.59	.08	103.7	6.00	.05	106.7	5.93	.04	107.3	5.83	.07	107.3	5.92	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.9	5.91	.22	98.4	6.16	.21	95.5	5.93	.32	92.4	8.05	.15	84.5	7.16	.28	.0	.00	.00
630	93.6	7.04	.02	93.5	7.56	.10	90.4	6.52	.13	88.5	8.60	.25	82.7	8.13	.32	.0	.00	.00
1250	88.3	8.26	.22	89.3	8.36	.12	86.6	7.49	.30	88.2	8.89	.28	80.0	8.46	.49	.0	.00	.00
2500	84.8	5.51	.64	86.4	5.94	.59	82.8	5.62	.56	81.9	8.44	.02	75.7	8.44	.31	.0	.00	.00
5000	79.9	3.62	.70	81.0	3.44	1.01	79.7	4.83	.47	77.6	7.49	.01	70.2	8.16	.36	.0	.00	.00
OASPL	107.3	5.68	.15	107.4	5.96	.11	105.9	6.24	.20	105.7	8.22	.25	100.5	7.63	.13	.0	.00	.00

RUNS 431- 434, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.7	7.31	.05	91.9	7.23	.07	96.4	6.84	.29	97.3	6.33	.08	98.2	6.49	.10
630	84.6	7.46	.05	89.5	7.30	.21	92.5	7.70	.06	95.1	7.33	.11	94.2	7.29	.08
1250	80.0	8.12	.05	84.3	8.57	.31	87.7	8.95	.41	89.7	9.40	.20	88.4	8.30	.27
2500	72.5	6.83	.79	77.9	5.92	.79	82.0	5.84	.75	85.0	6.69	.78	84.5	5.11	1.04
5000	64.6	1.90	.29	70.8	2.30	.61	77.3	2.04	.44	79.3	2.56	.39	80.8	2.80	.58
OASPL	99.4	5.57	.06	103.6	6.01	.03	106.4	5.65	.12	106.9	5.59	.02	107.0	5.71	.07

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.5	6.74	.12	98.6	6.21	.28	95.3	5.99	.13	91.6	7.74	.12	84.2	6.93	.15	.0	.00	.00
630	93.4	7.02	.29	93.4	7.37	.06	91.2	7.26	.20	87.9	7.75	.10	82.4	7.86	.48	.0	.00	.00
1250	88.3	8.04	.41	88.9	7.81	.02	87.0	7.29	.42	84.7	8.35	.18	79.7	8.15	.17	.0	.00	.00
2500	84.7	4.86	.49	85.5	4.13	.78	83.4	5.38	.61	81.3	7.81	.34	75.5	7.66	.43	.0	.00	.00
5000	80.4	1.78	.14	81.4	2.11	.66	80.4	3.31	.54	77.0	6.13	.19	70.0	7.08	.37	.0	.00	.00
OASPL	107.3	5.66	.22	107.2	5.73	.03	106.0	6.23	.26	105.3	7.84	.21	100.7	7.97	.11	.0	.00	.00

RUNS 435- 438, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.2	7.77	.28	92.1	7.23	.07	96.8	6.71	.11	97.2	6.32	.20	98.4	6.53	.11
630	85.1	7.53	.28	89.8	7.33	.04	92.4	7.37	.11	95.2	7.38	.04	94.0	7.00	.11
1250	80.6	8.73	.23	84.8	8.77	.32	87.7	9.02	.12	90.1	10.•	.45	88.7	9.17	.31
2500	73.4	6.73	.32	78.4	7.12	.64	82.5	7.35	.39	84.9	8.97	.73	84.7	6.28	.52
5000	66.6	8.13	.50	72.1	8.55	.17	78.6	8.74	.59	79.4	6.67	.72	80.5	8.89	.11
OASPL	99.6	5.62	.12	103.8	5.91	.11	106.8	5.79	.19	107.0	5.61	.02	107.1	5.73	.16

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.5	5.93	.28										85.3	7.43	.20	.0	.00	.00
630	93.1	7.05	.24										83.7	6.18	.17	.0	.00	.00
1250	87.9	8.53	.26										80.4	8.41	.30	.0	.00	.00
2500	84.4	7.76	.40										76.7	8.27	.30	.0	.00	.00
5000	80.7	8.91	.25										71.6	8.91	.28	.0	.00	.00
OASPL	106.9	5.56	.02										01.3	7.79	.24	.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 439- 442, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.1	7.70	.31	92.5	7.37	.30	96.4	6.51	.38	97.8	6.49	.44	98.4	6.83	.28
630	84.7	7.19	.23	90.0	7.21	.23	92.8	7.46	.14	95.1	7.69	.48	94.9	8.02	.33
1250	80.0	8.32	.27	84.8	8.79	.51	87.7	9.13	.54	88.9	8.86	.85	88.7	8.82	.38
2500	73.4	7.48	.49	79.1	7.92	.73	82.3	7.08	.66	84.5	6.84	.72	84.7	6.80	.69
5000	64.6	4.56	.46	71.0	4.83	.82	76.7	5.07	.41	79.6	4.80	.72	80.0	4.22	.98
OASPL	99.5	5.57	.21	104.2	6.05	.16	106.9	5.94	.22	107.2	5.64	.28	107.5	5.96	.28

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.8	6.39	.14	98.2	5.94	.19	96.3	6.24	.16	96.8	7.98	.03	85.7	7.07	.38	.0	.00	.00
630	94.2	7.16	.19	93.6	7.40	.30	92.2	7.44	.36	92.9	8.38	.18	82.9	7.98	.56	.0	.00	.00
1250	88.7	8.12	.54	89.0	7.70	.62	89.0	8.28	.52	89.1	8.16	.21	80.7	8.12	.51	.0	.00	.00
2500	85.0	5.15	.94	85.5	5.12	.91	84.8	5.99	.69	86.2	8.03	.53	77.0	8.19	.40	.0	.00	.00
5000	79.7	4.04	.65	80.1	4.46	.89	82.0	5.62	.56	81.8	7.80	.46	71.1	7.51	.37	.0	.00	.00
OASPL	108.0	5.78	.30	107.3	5.85	.30	107.2	6.58	.30	110.5	8.09	.26	101.4	7.32	.26	.0	.00	.00

RUNS 443- 446, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.3	7.58	.17	92.6	6.76	.32	97.2	7.32	.38	97.5	6.08	.27	98.6	6.75	.28
630	84.9	7.13	.31	90.3	7.35	.30	93.2	8.08	.34	95.2	7.41	.30	94.3	7.60	.18
1250	80.4	8.70	.29	84.9	8.61	.38	87.6	9.01	.37	88.9	9.50	.56	88.7	9.15	.29
2500	73.5	8.87	.41	78.8	8.48	.31	82.9	9.03	.54	84.7	9.28	.92	84.9	8.66	.44
5000	63.8	6.91	.66	71.0	7.80	.43	75.9	7.60	.63	79.2	7.92	.82	79.5	7.89	.63
OASPL	99.7	5.44	.13	104.4	6.12	.18	107.0	5.85	.21	107.2	5.62	.19	107.4	5.98	.23

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	100.0	6.37	.10	98.3	6.26	.41	96.2	5.85	.33	96.8	7.53	.33	86.9	8.15	.33	.0	.00	.00
630	94.2	7.07	.19	93.5	7.27	.31	91.6	7.05	.48	93.3	8.48	.23	84.8	9.08	.33	.0	.00	.00
1250	89.0	8.87	.21	89.4	8.75	.62	87.7	8.34	.39	89.5	8.37	.13	81.4	9.33	.46	.0	.00	.00
2500	85.4	5.61	.46	85.6	8.37	.54	84.4	8.36	.64	86.3	8.72	.26	78.1	9.90	.12	.0	.00	.00
5000	79.1	7.55	.64	79.7	7.93	.69	81.3	8.13	.57	81.8	8.44	.29	72.6	10.[illegible]	.26	.0	.00	.00
OASPL	108.2	5.98	.26	107.2	5.98	.28	106.8	6.40	.34	110.5	8.02	.23	102.0	7.76	.20	.0	.00	.00

RUNS 448- 451, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.4	7.07	.14	86.0	7.89	.23	88.0	7.65	.24	89.8	7.89	.23	91.1	7.99	.13
630	79.1	7.72	.29	83.6	7.59	.18	86.0	7.83	.26	88.3	8.04	.17	88.9	7.70	.22
1250	76.7	7.76	.36	81.1	8.06	.36	84.3	7.96	.32	85.4	7.92	.42	86.4	7.82	.41
2500	72.1	5.82	.35	78.0	6.46	.31	81.9	6.34	.52	83.6	6.01	.61	85.0	6.08	.67
5000	66.4	4.26	.36	73.5	5.09	.33	78.6	4.46	.33	80.8	4.84	.51	82.3	4.76	.31
OASPL	96.8	6.21	.14	100.8	6.52	.11	102.7	6.51	.08	102.6	6.63	.19	103.2	8.51	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.4	7.75	.26	93.5	8.39	.23	93.1	8.74	.13	93.3	8.82	.19	.0	.00	.00	.0	.00	.00
630	90.2	8.07	.45	91.0	8.42	.42	91.2	8.53	.34	87.3	7.65	.08	.0	.00	.00	.0	.00	.00
1250	86.9	7.42	.30	87.8	7.39	.26	87.5	7.72	.37	83.9	8.04	.15	.0	.00	.00	.0	.00	.00
2500	85.2	5.23	.48	85.8	5.41	.76	84.0	5.44	.85	81.5	7.54	.41	.0	.00	.00	.0	.00	.00
5000	81.6	4.28	.45	82.6	5.15	.50	82.1	5.23	.79	77.9	7.10	.38	.0	.00	.00	.0	.00	.00
OASPL	103.2	6.19	.27	103.6	6.68	.42	104.3	7.61	.34	106.5	9.23	.10	.0	.00	.00	.0	.00	.00

RUNS 452- 455, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.4	7.84	.21	86.4	8.09	.11	88.3	7.85	.04	90.1	8.32	.18	91.3	8.13	.17
630	79.1	7.71	.01	84.4	8.18	.17	86.4	7.88	.19	89.1	8.74	.26	89.4	8.82	.08
1250	76.9	7.83	.20	81.6	8.86	.12	84.6	8.38	.39	85.7	8.49	.31	86.7	8.56	.12
2500	72.9	8.12	.21	78.7	8.32	.19	82.1	8.06	.32	83.4	8.20	.43	84.6	7.85	.18
5000	66.1	7.37	.06	72.7	7.46	.28	78.4	7.49	.30	80.4	7.74	.29	81.7	7.69	.38
OASPL	97.3	6.44	.17	101.1	6.70	.10	102.8	6.85	.04	102.8	7.19	.04	103.4	7.40	.10

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.5	8.30	.06	93.3	8.41	.27	93.4	9.14	.10	94.1	9.50	.20	.0	.00	.00	.0	.00	.00
630	90.6	8.51	.27	91.1	8.99	.16	91.5	8.79	.20	87.8	8.08	.24	.0	.00	.00	.0	.00	.00
1250	87.6	8.41	.27	88.0	8.48	.09	87.8	8.51	.19	84.0	8.44	.02	.0	.00	.00	.0	.00	.00
2500	85.6	7.97	.44	85.7	7.88	.44	84.6	8.18	.13	81.6	8.58	.22	.0	.00	.00	.0	.00	.00
5000	81.2	7.39	.56	81.7	7.44	.61	81.6	7.59	.34	78.1	8.67	.14	.0	.00	.00	.0	.00	.00
OASPL	103.7	7.56	.13	103.7	7.76	.31	104.7	8.46	.11	106.6	9.48	.20	.0	.00	.00	.0	.00	.00

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 456- 459, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.2	8.04	.04	86.8	8.08	.25	88.5	7.64	.22	89.9	7.62	.13	91.4	8.04	.24
630	80.2	8.03	.24	84.4	7.95	.04	86.9	8.36	.21	88.8	8.34	.16	89.2	8.28	.08
1250	77.3	8.25	.28	81.7	8.45	.25	84.8	8.84	.21	86.0	8.81	.12	87.1	8.87	.04
2500	72.7	8.32	.21	78.4	8.67	.13	82.4	8.88	.28	83.7	8.88	.03	85.2	8.89	.07
5000	66.0	8.06	.28	73.2	8.54	.39	78.7	8.64	.14	80.4	8.47	.19	81.9	8.85	.22
OASPL	97.4	6.31	.10	101.2	6.62	.18	103.0	6.82	.05	103.0	7.08	.03	103.4	7.23	.10

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.0	7.60	.10	93.3	8.38	.17	93.5	8.84	.13	94.2	9.45	.30	.0	.00	.00	.0	.00	.00
630	90.6	8.62	.26	91.0	8.61	.30	91.5	8.77	.32	88.3	8.17	.33	.0	.00	.00	.0	.00	.00
1250	87.2	8.27	.28	88.0	8.76	.10	87.8	8.79	.13	83.8	7.88	.32	.0	.00	.00	.0	.00	.00
2500	85.5	8.78	.25	85.8	8.57	.27	84.4	8.45	.07	81.9	8.76	.28	.0	.00	.00	.0	.00	.00
5000	81.6	8.88	.12	82.0	8.40	.31	81.9	8.55	.17	77.2	7.87	.24	.0	.00	.00	.0	.00	.00
OASPL	103.5	7.28	.17	103.7	7.82	.15	104.5	8.35	.28	106.3	9.03	.28	.0	.00	.00	.0	.00	.00

RUNS 460- 463, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.1	7.71	.01	86.8	7.82	.05	88.6	7.76	.06	90.0	7.97	.08	91.4	8.16	.12
630	80.1	7.97	.27	84.5	7.90	.10	86.8	7.83	.25	89.0	8.59	.04	89.7	8.60	.10
1250	77.4	8.26	.16	82.2	8.90	.07	85.1	8.69	.15	86.1	8.76	.16	86.9	9.02	.04
2500	72.9	8.50	.10	78.5	8.72	.38	82.6	9.01	.23	83.9	9.36	.36	85.4	9.18	.23
5000	66.4	8.45	.16	73.4	8.90	.07	78.6	8.71	.10	80.7	9.24	.17	82.1	9.10	.14
OASPL	97.8	6.68	.19	101.5	6.56	.02	103.1	6.66	.15	103.0	7.12	.11	103.8	7.29	.11

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.7	8.21	.18	93.4	8.24	.14	92.8	8.32	.19	94.3	9.29	.16	.0	.00	.00	.0	.00	.00
630	91.0	8.81	.26	91.2	8.45	.33	91.0	8.42	.06	88.7	8.72	.06	.0	.00	.00	.0	.00	.00
1250	87.6	8.62	.25	88.5	9.04	.10	87.5	8.51	.19	84.2	8.64	.34	.0	.00	.00	.0	.00	.00
2500	85.4	8.77	.19	86.1	8.72	.06	84.2	8.39	.13	81.6	8.95	.18	.0	.00	.00	.0	.00	.00
5000	81.7	8.86	.25	82.1	8.48	.18	81.8	8.71	.07	78.1	8.90	.27	.0	.00	.00	.0	.00	.00
OASPL	103.8	7.42	.13	103.9	7.69	.26	104.2	8.16	.24	106.2	9.03	.17	.0	.00	.00	.0	.00	.00

RUNS 464- 467, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	81.6	6.45	.18	85.8	7.31	.33	88.0	6.98	.22	89.3	7.30	.17	90.7	7.30	.17
630	78.6	7.08	.10	83.1	7.60	.22	85.5	7.59	.31	87.6	7.51	.08	88.4	7.78	.06
1250	75.8	7.88	.14	79.9	7.75	.25	83.0	7.76	.06	85.1	8.48	.29	86.6	7.94	.12
2500	73.2	8.91	.86	78.7	9.19	.60	81.6	8.55	.35	83.0	8.42	.67	84.4	8.33	.79
5000	68.3	9.06	.92	74.7	9.15	.67	79.5	9.00	.88	81.1	8.82	.90	82.8	8.87	.97
OASPL	96.8	5.69	.16	100.7	6.09	.16	102.4	6.20	.11	102.3	6.46	.13	103.0	6.88	.08

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.5	7.58	.24	91.9	7.61	.31	92.1	8.34	.49	93.6	8.81	.60				.0	.00	.00
630	89.6	7.98	.30	89.4	7.67	.22	90.9	8.59	.31	87.5	7.86	.24				.0	.00	.00
1250	86.4	8.08	.33	86.8	8.15	.04	86.8	8.29	.05	83.5	7.81	.19				.0	.00	.00
2500	84.8	7.95	.64	85.5	8.18	.81	84.1	8.43	.67	81.0	7.88	.18				.0	.00	.00
5000	81.8	8.38	.69	82.2	8.37	.79	82.3	8.67	.60	77.6	8.00	.38				.0	.00	.00
OASPL	102.9	6.82	.08	102.6	7.14	.21	103.6	7.87	.31	105.5	8.61	.20				.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 474- 477, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.6	7.42	.12	85.7	7.93	.20	87.9	7.61	.33	89.3	7.86	.13	91.0	8.19	.19
630	78.0	7.54	.15	82.8	7.99	.13	85.5	8.12	.19	87.7	8.14	.08	89.0	8.66	.40
1250	74.4	7.36	.10	79.3	7.70	.23	83.1	8.26	.21	84.6	8.38	.05	85.5	8.39	.22
2500	70.3	7.03	.08	76.2	6.57	.62	80.2	7.64	.25	81.8	7.62	.09	83.8	7.98	.23
5000	65.0	6.21	.24	71.6	6.81	.24	77.1	6.79	.34	78.1	6.91	.13	81.1	7.85	.28
OASPL	96.8	6.36	.04	100.7	6.72	.04	102.6	6.85	.01	102.6	7.28	.10	102.9	7.18	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.8	8.34	.24	91.9	8.30	.05	92.0	8.62	.09	93.4	9.14	.14	.0	.00	.00	.0	.00	.00
630	89.9	8.55	.06	90.1	8.61	.18	90.7	8.84	.13	87.9	8.33	.14	.0	.00	.00	.0	.00	.00
1250	86.9	8.69	.19	87.2	8.61	.15	86.8	8.29	.05	83.5	8.37	.21	.0	.00	.00	.0	.00	.00
2500	84.4	7.87	.23	84.8	7.84	.55	83.2	7.33	.09	81.9	8.47	.24	.0	.00	.00	.0	.00	.00
5000	80.6	7.18	.32	80.4	6.64	.53	81.1	7.80	.34	77.7	8.08	.18	.0	.00	.00	.0	.00	.00
OASPL	103.1	7.30	.11	102.7	7.86	.12	103.8	8.11	.18	106.0	9.43	.08	.0	.00	.00	.0	.00	.00

RUNS 478- 481, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.2	6.48	.13	85.7	6.87	.06	87.7	6.67	.08	89.5	7.32	.21	90.8	7.24	.11
630	79.1	6.32	.14	83.2	7.02	.11	85.9	7.37	.11	87.7	7.56	.16	88.5	7.71	.12
1250	75.3	5.78	.10	79.5	6.04	.21	83.1	6.94	.30	84.7	7.66	.16	85.3	7.66	.16
2500	72.1	6.33	.14	77.8	6.99	.30	81.2	7.31	.27	82.7	7.87	.14	83.8	7.63	.03
5000	66.3	7.04	.27	72.8	7.28	.15	78.5	7.70	.38	80.2	8.04	.17	81.5	8.05	.08
OASPL	96.8	5.45	.02	100.7	5.89	.09	102.6	6.01	.06	102.6	6.46	.07	103.0	6.64	.13

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.5	7.76	.35	91.5	7.62	.18	91.6	8.13	.21	93.6	9.07	.29	.0	.00	.00	.0	.00	.00
630	89.5	7.64	.16	89.3	7.44	.09	90.2	7.72	.10	87.8	7.77	.12	.0	.00	.00	.0	.00	.00
1250	86.4	7.60	.10	86.8	7.79	.12	86.7	7.44	.08	83.3	7.67	.12	.0	.00	.00	.0	.00	.00
2500	84.5	7.94	.20	84.4	7.33	.17	84.0	7.86	.12	81.1	7.79	.12	.0	.00	.00	.0	.00	.00
5000	80.9	7.70	.07	81.2	7.36	.08	81.4	7.91	.05	77.9	8.02	.18	.0	.00	.00	.0	.00	.00
OASPL	102.9	6.52	.13	102.6	7.04	.17	103.3	7.64	.16	105.7	9.20	.06	.0	.00	.00	.0	.00	.00

RUNS 482- 485, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.3	7.23	.29	92.6	7.04	.05	96.1	7.02	.29	96.7	6.16	.30	98.2	6.72	.16
630	84.5	7.66	.28	89.6	7.40	.21	92.0	7.38	.04	93.9	7.39	.34	94.1	7.48	.14
1250	79.8	8.61	.15	84.0	8.98	.10	87.1	9.16	.17	87.4	9.31	.12	87.8	8.77	.28
2500	73.6	9.12	.36	80.0	9.84	.09	82.8	9.34	.30	83.7	9.66	.29	85.3	9.63	.18
5000	65.9	7.43	.18	73.1	8.29	.30	78.1	7.91	.38	80.0	8.69	.11	81.2	8.82	.22
OASPL	99.9	5.68	.23	104.1	5.86	.14	107.0	5.88	.10	106.7	5.83	.21	107.4	6.02	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.9	6.38	.22	97.8	6.29	.02	98.4	6.31	.32	92.3	7.54	.20	88.8	7.16	.21	.0	.00	.00
630	93.7	7.38	.20	92.1	7.34	.12	91.1	7.57	.24	88.1	8.12	.10	84.4	8.09	.09	.0	.00	.00
1250	87.7	9.06	.13	87.2	8.65	.09	86.5	8.70	.06	84.1	8.50	.11	80.8	8.88	.28	.0	.00	.00
2500	85.5	9.85	.34	85.3	9.26	.17	83.7	9.03	.17	81.8	8.86	.25	77.8	8.81	.22	.0	.00	.00
5000	81.2	8.94	.37	81.2	8.68	.28	80.6	8.51	.24	77.7	8.48	.23	74.2	8.90	.18	.0	.00	.00
OASPL	107.8	5.94	.11	106.4	5.85	.05	105.9	6.29	.11	105.9	8.20	.38	101.8	7.88	.06	.0	.00	.00

RUNS 486- 489, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	86.9	7.01	.33	92.5	7.04	.23	95.4	6.38	.13	97.3	6.45	.19	98.3	6.58	.10
630	83.6	6.81	.44	88.9	6.98	.14	91.8	6.99	.16	94.2	7.00	.20	94.0	7.42	.08
1250	78.8	8.00	.29	83.9	8.49	.20	86.8	8.92	.22	87.4	8.58	.19	87.5	8.68	.09
2500	71.5	7.74	.60	78.5	8.51	.50	81.4	8.20	.37	83.1	8.56	.44	83.6	8.14	.48
5000	62.8	7.40	.21	70.1	7.66	.47	75.4	7.74	.69	77.8	8.04	.36	78.4	7.87	.32
OASPL	99.0	5.01	.23	103.6	5.66	.23	106.1	5.27	.09	107.0	5.68	.09	106.8	5.70	.17

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.2	5.48	.04	98.3	6.23	.36	95.8	5.32	.31	91.6	7.31	.42	84.7	5.72	.16	.0	.00	.00
630	93.3	6.58	.11	92.6	6.77	.10	91.3	6.75	.27	88.0	7.82	.06	84.3	8.34	.13	.0	.00	.00
1250	87.6	8.54	.17	87.8	8.46	.19	86.6	7.84	.13	83.6	8.24	.14	81.2	9.46	.47	.0	.00	.00
2500	84.3	8.37	.48	84.5	7.83	.29	83.8	8.19	.39	80.8	8.60	.28	78.2	10.*	.69	.0	.00	.00
5000	78.3	7.85	.40	78.9	7.82	.40	79.3	7.88	.19	74.8	8.18	.20	72.3	11.*	1.58	.0	.00	.00
OASPL	107.3	5.54	.17	106.6	5.88	.14	106.2	6.05	.33	104.8	7.68	.26	102.1	8.27	.24	.0	.00	.00

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
RUNS 490- 493, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	87.1	7.40	.09	92.3	7.11	.23	95.5	6.49	.10	96.8	6.31	.33	97.9	6.77	.10			
630	84.1	7.16	.21	89.0	7.07	.14	91.5	7.20	.14	94.4	7.57	.01	93.6	7.00	.11			
1250	78.7	8.21	.12	84.1	8.79	.30	86.8	8.94	.06	87.2	8.68	.28	87.3	8.98	.04			
2500	72.4	8.82	.12	79.0	9.39	.15	82.1	9.36	.11	83.1	9.11	.23	84.1	9.46	.06			
5000	62.7	6.83	.06	69.6	7.04	.27	75.2	7.60	.18	77.2	7.95	.44	78.8	8.38	.21			
OASPL	99.1	5.37	.19	103.8	6.00	.05	106.2	5.61	.01	106.9	5.85	.07	106.8	5.83	.07			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	99.1	6.35	.21	97.9	6.20	.15	96.5	6.25	.09	91.5	7.12	.13	85.1	6.47	.24	.0	.00	.00
630	93.5	7.04	.02	92.4	6.94	.13	91.9	7.53	.08	87.8	8.02	.12	84.0	7.90	.10	.0	.00	.00
1250	87.7	8.94	.06	87.9	8.79	.05	87.2	8.65	.09	83.4	8.34	.29	80.3	8.14	.08	.0	.00	.00
2500	84.7	9.54	.02	88.1	8.87	.12	83.9	9.12	.11	80.5	8.68	.17	76.6	8.01	.42	.0	.00	.00
5000	77.9	8.06	.21	79.5	8.62	.30	79.9	8.76	.16	74.0	8.13	.45	70.4	8.01	.42	.0	.00	.00
OASPL	107.4	5.73	.11	106.7	5.79	.09	106.6	6.44	.17	104.9	7.86	.37	101.9	7.62	.14	.0	.00	.00
RUNS 502- 505, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	81.9	8.94	.13	86.1	7.47	.30	88.8	7.73	.25	89.9	7.74	.07						
630	78.8	7.53	.28	83.4	7.69	.14	86.0	7.88	.19	88.2	7.66	.13						
1250	75.2	7.91	.29	80.0	7.96	.19	84.2	8.85	.11	85.8	8.50	.15						
2500	71.1	8.48	.31	77.1	8.62	.21	81.0	8.73	.22	82.5	8.38	.27						
5000	62.6	7.41	.14	68.8	7.87	.10	75.3	8.28	.14	78.2	8.44	.31						
OASPL	96.7	5.50	.04	100.8	6.28	.05	102.3	6.18	.15	102.8	6.83	.02						
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.9	7.92	.09	92.1	8.10	.07	93.6	9.08	.11	94.8	9.44	.13	85.5	7.89	.13	.0	.00	.00
630	89.8	8.15	.04	91.2	8.77	.03	91.6	8.76	.20	87.7	7.82	.06	82.5	7.77	.32	.0	.00	.00
1250	86.9	8.33	.14	87.7	8.48	.09	87.5	8.65	.13	83.4	8.25	.06	79.5	8.13	.00	.0	.00	.00
2500	84.5	8.52	.15	85.5	8.76	.09	84.8	8.81	.12	80.8	8.10	.07	75.9	7.86	.30	.0	.00	.00
5000	78.2	8.10	.07	79.6	8.21	.13	80.8	8.82	.18	75.1	8.09	.20	69.7	8.18	.09	.0	.00	.00
OASPL	102.8	7.04	.08	103.1	7.48	.12	104.3	8.19	.08	105.7	8.90	.11	103.0	7.80	.06	.0	.00	.00
RUNS 506- 509, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	85.5	8.68	.44	88.2	8.36	.24	90.1	8.06	.32	91.0	8.08	.38	92.4	8.24	.20			
630	80.6	8.25	.24	85.1	8.26	.24	87.2	8.18	.07	89.2	8.12	.03	89.6	8.25	.08			
1250	76.9	8.46	.02	81.6	8.71	.23	84.1	7.96	.32	86.0	8.40	.23	86.7	8.41	.10			
2500	72.4	8.65	.07	78.2	8.82	.18	80.9	8.07	.20	82.9	8.60	.29	84.1	8.49	.38			
5000	64.7	7.74	.15	72.3	8.20	.18	76.6	7.84	.13	79.1	8.33	.41	79.7	8.28	.26			
OASPL	97.8	6.29	.09	101.9	6.67	.20	102.9	6.27	.25	103.1	6.77	.08	103.5	7.12	.11			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	93.0	8.06	.14	93.3	8.80	.40	93.1	8.66	.35	94.7	8.53	.39	85.5	8.03	.22	.0	.00	.00
630	90.7	8.37	.23	90.7	8.63	.14	91.1	8.83	.35	88.2	7.86	.13	82.8	8.40	.28	.0	.00	.00
1250	87.2	8.45	.10	87.5	8.56	.27	87.3	8.85	.05	83.6	7.98	.49	78.9	8.38	.20	.0	.00	.00
2500	84.5	8.49	.07	85.2	9.01	.15	83.8	8.90	.22	81.0	8.34	.34	75.9	8.33	.13	.0	.00	.00
5000	79.5	8.01	.09	80.3	8.58	.22	80.8	8.77	.21	77.0	8.37	.23	70.8	8.33	.13	.0	.00	.00
OASPL	103.8	7.01	.09	103.7	7.77	.18	104.2	8.22	.28	106.5	8.70	.16	102.6	7.41	.11	.0	.00	.00
RUNS 510- 513, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	87.0	7.03	.27	92.1	7.01	.35	94.9	6.53	.14	96.2	6.29	.32	97.5	6.47	.23			
630	84.2	7.22	.10	89.6	7.25	.27	92.0	7.70	.24	94.0	7.58	.22	92.8	7.03	.16			
1250	78.9	7.92	.17	84.1	8.68	.21	86.7	9.11	.30	86.8	8.70	.15	87.3	9.06	.29			
2500	72.5	8.33	.37	78.8	8.61	.38	81.9	9.12	.24	82.8	8.85	.32	83.8	8.97	.16			
5000	64.0	7.17	.14	72.1	8.14	.36	76.0	7.83	.48	78.0	7.78	.22	78.7	7.91	.38			
OASPL	99.0	5.31	.01	103.4	5.79	.11	105.9	5.58	.09	106.2	5.78	.12	106.3	5.53	.17			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	98.1	5.92	.16	97.4	6.07	.20	94.8	6.03	.29	91.7	6.76	.43	84.9	6.62	.20	.0	.00	.00
630	93.0	6.88	.53	91.7	6.67	.08	90.8	7.46	.32	87.5	7.26	.20	82.5	6.91	.37	.0	.00	.00
1250	86.9	8.02	.16	87.2	8.50	.15	86.3	8.32	.04	83.3	7.72	.34	78.8	7.27	.31	.0	.00	.00
2500	83.7	8.26	.04	83.9	8.48	.40	82.5	8.23	.06	80.6	8.19	.44	75.5	7.64	.39	.0	.00	.00
5000	78.7	8.01	.22	79.2	8.16	.20	79.7	8.20	.17	76.2	8.04	.41	70.3	7.68	.33	.0	.00	.00
OASPL	107.0	5.55	.22	106.1	5.84	.10	105.5	6.43	.06	105.1	7.52	.32	100.7	7.30	.08	.0	.00	.00

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT | SPL, 250 M/S | EXP. OF VJ | SCATTER (column headings repeated for each microphone)

RUNS 514- 517, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.1	7.14	.17	92.4	7.07	.30	94.4	5.96	.29	96.1	5.86	.29	97.7	6.70	.22
630	83.8	6.83	.19	89.4	7.40	.21	91.5	7.46	.16	93.5	6.90	.05	93.4	7.14	.10
1250	78.7	7.74	.15	83.6	8.22	.49	86.5	8.71	.47	87.2	8.79	.06	87.3	8.05	.09
2500	72.0	7.00	.45	78.6	7.47	.46	81.8	7.81	.50	83.1	7.70	.53	83.6	7.82	.49
5000	63.8	5.85	.16	71.3	6.05	.42	75.7	5.91	.56	78.1	6.07	.29	78.5	6.09	.70
OASPL	99.0	5.35	.13	103.4	5.65	.13	105.6	5.33	.20	106.3	5.61	.08	106.8	6.09	.11

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	97.9	5.59	.23	97.4	6.05	.09	95.0	5.76	.35	91.7	7.02	.25	85.2	8.81	.24	.0	.00	.00
630	92.9	6.76	.18	92.2	7.01	.19	90.7	7.36	.33	87.1	7.36	.21	83.1	7.39	.13	.0	.00	.00
1250	87.4	8.25	.16	87.1	8.09	.10	86.0	7.94	.39	83.3	7.81	.34	80.5	8.35	.38	.0	.00	.00
2500	83.6	6.93	.68	84.3	7.48	.39	82.3	7.20	.42	80.2	7.71	.49	77.0	8.55	.47	.0	.00	.00
5000	78.1	6.04	.59	79.1	6.56	.55	79.5	7.08	.29	75.7	7.42	.45	71.5	8.16	.34	.0	.00	.00
OASPL	106.8	5.39	.04	106.1	5.83	.09	105.1	5.97	.15	105.1	7.44	.40	100.6	7.11	.16	.0	.00	.00

RUNS 518- 521, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.7	7.32	.22	92.2	6.98	.31	95.8	7.22	.17	96.7	6.48	.12	97.3	6.59	.25
630	84.5	7.15	.21	89.2	7.02	.20	92.1	7.63	.22	94.1	7.54	.28	93.2	6.93	.29
1250	79.0	6.85	.51	83.7	7.08	.58	86.7	7.46	.68	87.6	7.44	.29	86.8	6.86	.47
2500	72.9	3.60	.34	79.4	3.88	.91	82.7	3.46	.49	83.9	3.08	.39	84.2	2.77	.28
5000	66.0	2.50	.08	73.5	2.42	.37	78.5	2.78	.28	80.7	2.13	.08	80.7	1.59	.32
OASPL	99.5	5.51	.11	103.9	5.89	.11	106.5	5.87	.17	106.4	5.53	.04	106.7	5.72	.09

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	98.3	6.11	.12	98.5	7.00	.39	95.2	6.01	.03	91.4	7.11	.25	88.3	7.79	.23	.0	.00	.00
630	93.7	7.36	.24	92.5	7.23	.04	91.2	7.53	.08	86.8	7.48	.32	83.1	8.70	.30	.0	.00	.00
1250	87.4	6.99	.66	87.4	6.80	.66	86.4	6.89	.22	82.9	7.45	.33	80.2	8.70	.19	.0	.00	.00
2500	85.1	3.27	.92	84.7	3.00	.78	83.2	4.02	.80	80.3	6.80	.49	76.2	7.23	.64	.0	.00	.00
5000	80.5	1.63	.80	80.9	2.08	.50	81.3	3.46	.49	76.5	8.00	.53	70.9	6.74	.32	.0	.00	.00
OASPL	107.4	5.69	.20	106.9	6.14	.28	106.0	6.39	.26	105.0	7.63	.21	100.9	7.59	.19	.0	.00	.00

RUNS 526- 529, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.8	7.35	.52	92.5	6.71	.00	95.4	6.22	.41	96.2	5.53	.15	98.5	7.11	.42
630	83.8	6.78	.11	89.1	6.91	.32	92.0	7.50	.18	93.5	6.52	.30	94.2	7.59	.31
1250	79.3	8.30	.05	83.7	8.38	.31	86.7	8.79	.59	86.9	8.45	.23	87.7	8.86	.41
2500	72.7	8.75	.22	79.2	8.97	.11	82.0	8.91	.35	83.7	9.43	.22	84.7	9.40	.11
5000	63.5	2.83	.78	71.5	3.80	.78	75.6	3.99	.88	78.2	4.48	.56	79.1	5.23	.79
OASPL	99.3	5.39	.17	103.6	5.45	.20	106.2	5.35	.22	106.2	5.38	.14	107.1	5.90	.25

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	99.3	6.84	.28	96.8	5.68	.41	95.0	5.54	.43	91.9	7.38	.95	88.2	7.11	.19	.0	.00	.00
630	93.9	7.61	.46	91.8	7.11	.23	90.7	6.28	.14	87.5	7.55	.64	83.2	7.74	.32	.0	.00	.00
1250	87.7	8.94	.37	87.1	8.46	.43	86.7	8.18	.07	83.3	7.76	.40	79.8	7.91	.06	.0	.00	.00
2500	84.6	9.01	.19	84.1	8.85	.32	83.7	8.74	.13	80.8	8.73	.62	77.0	8.70	.19	.0	.00	.00
5000	78.1	5.03	.75	78.7	5.70	1.16	79.7	5.77	.50	76.1	7.20	.82	71.7	7.49	.47	.0	.00	.00
OASPL	107.7	6.09	.17	105.8	5.68	.26	105.6	5.96	.28	105.0	7.49	.42	101.3	7.79	.06	.0	.00	.00

RUNS 530- 533, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	86.8	6.80	.15	92.3	6.57	.06	94.7	5.81	.12	96.8	6.02	.21	97.6	6.58	.10
630	83.4	6.64	.22	89.0	6.92	.28	91.5	6.97	.35	93.8	7.01	.26	93.7	7.50	.26
1250	77.7	6.05	.06	83.1	6.73	.32	86.7	7.55	.24	86.7	7.17	.26	87.5	7.44	.36
2500	71.2	4.42	.74	78.5	5.42	.59	81.6	5.71	.68	83.1	5.95	.54	83.6	5.60	.80
5000	64.1	1.50	.52	71.9	2.31	.49	76.3	2.42	.45	79.1	3.31	.46	79.6	3.70	.43
OASPL	99.0	5.22	.05	103.7	5.67	.02	106.2	5.42	.05	106.5	5.40	.18	106.9	5.81	.03

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	98.3	6.00	.12	97.3	5.88	.27	95.1	5.86	.08	91.9	7.38	.64	84.6	6.97	.32	.0	.00	.00
630	93.3	6.74	.19	91.7	6.85	.05	90.8	6.81	.31	87.1	7.37	.81	82.1	7.31	.38	.0	.00	.00
1250	87.3	7.18	.51	86.9	6.99	.05	86.4	7.24	.24	83.4	7.83	.65	79.3	7.69	.48	.0	.00	.00
2500	84.0	5.78	.77	83.5	5.43	.46	83.1	6.47	.29	80.9	7.96	.72	75.8	7.17	.43	.0	.00	.00
5000	79.1	3.52	.70	79.3	4.16	.48	80.0	4.84	.35	76.6	6.38	.98	70.2	6.81	.53	.0	.00	.00
OASPL	107.2	5.54	.14	106.1	5.67	.04	105.5	6.07	.19	105.5	7.83	.45	100.4	7.24	.18	.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 544- 547, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.3	6.74	.05	92.9	6.81	.14	95.7	5.94	.19	97.3	5.96	.42	98.3	6.73	.20
630	84.7	7.34	.26	89.6	7.44	.29	92.1	7.34	.12	93.9	6.99	.20	94.3	7.84	.24
1250	79.5	8.29	.27	88.0	9.08	.05	87.7	9.08	.09	88.0	9.19	.31	88.7	9.82	.34
2500	73.8	8.85	.18	80.1	9.02	.17	83.1	9.30	.24	84.2	9.34	.21	86.1	9.79	.29
5000	65.9	7.70	.31	73.3	8.24	.29	78.3	7.88	.19	80.7	8.79	.06	81.6	8.72	.34
OASPL	99.5	5.20	.02	104.3	5.69	.14	106.8	5.50	.10	106.8	5.47	.21	107.6	5.95	.17

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.3	6.69	.39	98.1	6.37	.30	95.8	5.81	.12	91.8	7.46	.19	88.4	6.93	.15	.0	.00	.00
630	94.0	7.15	.25	92.4	7.11	.25	91.2	7.23	.04	87.7	7.82	.21	82.4	7.14	.08	.0	.00	.00
1250	88.4	9.14	.18	87.8	8.51	.02	87.4	8.75	.14	84.2	8.25	.25	79.8	8.08	.18	.0	.00	.00
2500	86.0	9.48	.10	86.3	9.07	.17	85.1	9.28	.08	81.8	8.40	.20	77.1	8.26	.24	.0	.00	.00
5000	81.7	9.04	.22	81.9	8.88	.28	83.1	9.07	.17	77.5	8.28	.16	72.6	8.71	.07	.0	.00	.00
OASPL	108.0	5.98	.21	106.9	6.02	.23	106.7	6.36	.27	105.3	7.85	.29	101.2	7.24	.08	.0	.00	.00

RUNS 548- 551, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.4	7.05	.16	93.4	7.06	.26	97.0	6.83	.22	97.6	6.36	.18	98.8	7.25	.36
630	84.4	6.69	.46	89.5	7.19	.25	92.9	7.38	.29	94.0	7.38	.10	94.6	7.82	.38
1250	79.1	7.89	.32	85.1	8.93	.23	88.6	9.87	.38	87.7	8.97	.15	88.4	9.39	.24
2500	73.6	8.75	.22	80.6	9.83	.22	83.7	9.30	.27	84.6	9.59	.18	85.8	9.27	.21
5000	65.9	7.79	.31	73.4	8.13	.25	79.4	8.67	.28	80.5	8.61	.38	81.6	8.71	.10
OASPL	99.7	5.28	.16	104.7	5.91	.12	107.6	6.98	.18	107.0	5.84	.16	107.6	6.09	.23

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.8	6.93	.18	98.2	6.40	.14	95.7	5.71	.18	92.0	7.66	.44	85.0	7.10	.43	.0	.00	.00
630	94.0	7.37	.06	92.5	7.37	.11	91.3	7.15	.17	87.7	8.02	.12	81.7	7.16	.82	.0	.00	.00
1250	87.9	8.56	.10	88.5	8.97	.16	87.3	8.65	.26	84.1	8.69	.15	79.4	8.36	.70	.0	.00	.00
2500	86.2	9.34	.22	86.8	9.60	.01	85.6	9.51	.09	81.7	8.98	.10	76.6	8.86	.75	.0	.00	.00
5000	81.4	8.64	.08	82.5	9.13	.02	82.8	8.75	.11	77.7	8.83	.12	71.7	8.24	.85	.0	.00	.00
OASPL	108.1	5.95	.20	106.9	6.17	.12	106.8	6.32	.15	105.6	8.07	.29	100.0	6.86	.70	.0	.00	.00

RUNS 552- 555, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.6	7.22	.29	93.6	7.56	.53	96.1	6.70	.35	96.9	6.14	.09	98.1	6.63	.04
630	84.7	7.44	.17	90.0	7.82	.30	92.2	7.52	.07	93.5	6.92	.28	93.9	7.71	.24
1250	80.0	8.88	.20	85.2	9.38	.29	87.8	9.17	.07	87.2	8.83	.12	88.3	9.18	.09
2500	74.2	9.39	.07	80.4	9.46	.10	83.8	9.54	.22	84.1	9.51	.11	86.9	9.99	.12
5000	66.3	8.24	.14	73.8	8.94	.28	78.9	8.50	.15	80.0	8.50	.15	81.8	9.01	.21
OASPL	99.8	5.65	.14	104.6	6.27	.42	106.8	5.63	.12	106.7	5.67	.05	107.4	5.95	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.4	6.80	.14	99.1	7.15	.11	96.0	6.48	.04	91.9	7.56	.10	88.4	6.96	.07	.0	.00	.00
630	93.8	7.69	.15	92.6	7.46	.14	91.2	7.62	.10	87.5	8.02	.34	82.4	6.87	.20	.0	.00	.00
1250	88.6	9.60	.08	88.2	8.97	.15	87.4	8.91	.21	83.6	8.45	.27	79.4	7.43	.09	.0	.00	.00
2500	86.5	10.*	.11	86.7	9.74	.08	84.9	9.37	.12	81.7	8.86	.56	76.6	7.60	.35	.0	.00	.00
5000	81.7	9.11	.09	82.5	9.24	.31	82.7	9.25	.25	77.5	8.52	.30	71.6	7.48	.31	.0	.00	.00
OASPL	108.0	6.22	.05	107.1	6.44	.08	106.6	6.71	.21	105.7	8.11	.17	101.2	7.43	.09	.0	.00	.00

RUNS 556- 559, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.0	6.80	.16	92.3	6.74	.34	95.2	6.71	.17	96.2	5.89	.25	97.4	6.86	.39
630	84.4	7.21	.04	89.3	6.11	.75	92.0	7.81	.14	94.1	8.11	.27	93.9	8.16	.28
1250	80.5	7.90	.22	84.7	7.49	.31	88.5	8.97	.28	91.0	10.*	.93	90.2	9.82	.75
2500	75.8	6.87	.03	81.2	6.59	.39	85.7	8.31	.23	88.2	9.60	.91	88.1	9.28	.73
5000	69.3	7.58	.44	75.6	7.39	.33	81.8	8.60	.45	84.6	9.81	.23	84.7	9.66	.37
OASPL	99.3	5.18	.07	103.9	5.62	.21	106.6	5.90	.17	106.8	5.89	.19	106.9	6.99	.15

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.5	5.67	.41	98.3	6.69	.34	95.2	6.14	.07	91.8	7.35	.20	86.1	8.19	.45	.0	.00	.00
630	93.7	7.81	.34	93.0	7.68	.35	91.4	7.38	.29	87.2	7.46	.30	83.9	9.09	.48	.0	.00	.00
1250	90.5	9.44	.70	90.5	9.43	.87	88.4	8.23	.19	83.9	8.13	.25	81.1	9.35	.22	.0	.00	.00
2500	88.6	9.14	.82	88.5	8.89	.60	86.0	7.85	.04	81.7	7.75	.10	78.3	8.88	.21	.0	.00	.00
5000	84.9	9.59	.52	85.4	9.41	.55	84.2	8.25	.26	78.3	8.18	.18	74.0	9.29	.18	.0	.00	.00
OASPL	107.0	5.46	.25	107.0	6.10	.37	106.0	6.33	.13	105.0	7.43	.27	101.7	8.28	.47	.0	.00	.00

TABLE A-I.- CONTINUED.

Columns for each microphone: SPL, 250 M/S; EXP. OF VJ; SCATTER. Rows: MID FREQ, 1/3 OCT.

RUNS 567- 570, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.2	7.43	.40	92.7	7.48	.15	95.3	6.90	.10	97.2	7.20	.03	97.5	7.44	.20
630	83.5	7.46	.20	88.6	8.03	.10	91.0	7.70	.06	93.2	8.01	.15	93.1	8.43	.07
1250	78.1	7.45	.15	83.5	8.05	.36	85.9	8.19	.39	87.3	8.82	.38	87.2	8.64	.28
2500	74.1	8.38	.16	80.4	8.69	.35	82.9	8.88	.18	85.1	9.28	.12	85.6	9.41	.16
5000	64.9	9.11	.20	72.1	9.24	.21	76.2	9.20	.23	79.9	9.62	.12	79.7	9.38	.32
OASPL	99.7	5.67	.04	104.0	5.88	.14	106.2	5.72	.13	106.7	6.03	.06	106.8	6.08	.10

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.8	7.23	.32	96.9	6.22	.16	96.1	6.82	.15	92.0	7.83	.09	88.6	7.07	.21	.0	.00	.00
630	93.1	8.02	.12	91.7	7.84	.20	90.8	7.48	.14	87.6	7.93	.09	83.1	8.83	.09	.0	.00	.00
1250	87.9	8.86	.28	87.4	8.60	.17	86.0	8.03	.24	83.9	8.08	.15	79.7	8.84	.19	.0	.00	.00
2500	85.7	8.94	.22	85.6	8.68	.13	83.3	8.88	.20	80.9	8.06	.16	76.7	8.77	.21	.0	.00	.00
5000	80.2	8.83	.12	81.4	9.02	.09	79.2	8.72	.28	78.7	8.21	.16	71.3	9.45	.38	.0	.00	.00
OASPL	107.1	5.94	.15	106.0	6.02	.18	108.3	6.21	.14	108.4	6.06	.28	101.3	7.48	.09	.0	.00	.00

RUNS 573- 576, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.1	7.02	.20	92.3	7.04	.23	96.0	7.23	.04	96.7	6.58	.11	97.2	6.77	.11
630	83.8	7.26	.18	89.0	7.14	.08	92.0	7.56	.12	94.0	7.67	.08	93.5	7.89	.10
1250	78.7	8.11	.17	84.3	9.00	.27	86.7	9.19	.36	87.4	9.08	.10	87.4	8.81	.12
2500	72.0	8.25	.24	79.0	8.85	.32	81.1	8.95	.41	83.8	9.63	.35	84.4	9.49	.28
5000	63.3	7.53	.28	70.8	8.42	.07	74.1	7.86	.44	79.2	9.27	.13	79.1	9.19	.04
OASPL	99.1	5.34	.14	103.7	5.80	.04	106.2	5.67	.12	106.6	5.86	.11	106.8	5.90	.20

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.8	6.66	.08	97.6	6.19	.42	95.0	5.74	.19	91.9	7.61	.46	88.5	7.84	.18	.0	.00	.00
630	93.7	7.63	.21	92.3	7.80	.14	91.0	7.26	.20	87.4	7.76	.40	83.2	7.87	.14	.0	.00	.00
1250	88.2	9.54	.02	88.1	9.01	.19	86.0	8.06	.24	83.9	8.57	.36	79.3	7.87	.14	.0	.00	.00
2500	85.2	9.64	.10	85.4	9.25	.13	83.1	8.75	.14	80.3	8.86	.37	76.8	8.76	.20	.0	.00	.00
5000	79.7	9.21	.07	80.3	8.70	.43	76.7	8.59	.20	75.0	8.22	.54	70.8	8.21	.14	.0	.00	.00
OASPL	107.4	6.06	.01	106.5	6.16	.19	105.6	6.13	.14	105.3	7.99	.44	101.3	7.74	.21	.0	.00	.00

RUNS 577- 580, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.4	7.60	.10	88.2	6.79	.18	90.9	7.30	.30	93.0	7.60	.22	93.9	7.89	.10
630	81.5	8.11	.17	85.7	7.37	.46	88.7	7.27	.11	90.1	8.09	.11	89.7	8.19	.10
1250	76.2	8.35	.15	80.6	8.33	.37	83.5	8.41	.17	84.8	8.78	.13	85.2	8.68	.32
2500	69.2	7.92	.17	75.6	8.44	.29	78.8	8.41	.16	81.4	9.02	.26	81.7	8.36	.24
5000	60.8	7.33	.04	68.0	7.73	.16	72.9	8.16	.20	77.3	8.87	.00	77.6	8.76	.08
OASPL	97.6	4.90	.19	101.5	5.48	.22	104.3	5.75	.10	104.7	6.14	.17	105.0	6.49	.06

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.8	6.62	.15	95.6	6.82	.19	93.3	6.62	.24	91.2	6.83	.24	89.7	8.18	.13	.0	.00	.00
630	90.3	8.08	.08	89.9	7.96	.28	90.1	8.14	.45	88.6	8.38	.18	85.0	8.42	.06	.0	.00	.00
1250	85.4	8.64	.18	86.0	8.62	.30	85.5	8.70	.06	84.7	8.92	.06	81.1	8.87	.28	.0	.00	.00
2500	82.8	8.54	.17	84.0	9.09	.32	82.4	8.82	.22	81.7	9.02	.09	77.9	8.71	.07	.0	.00	.00
5000	78.1	8.22	.15	79.8	8.88	.05	78.7	8.78	.16	76.4	8.87	.12	72.6	8.73	.30	.0	.00	.00
OASPL	105.4	6.19	.03	105.6	6.32	.04	105.0	5.99	.06	103.0	6.19	.19	102.2	7.38	.09	.0	.00	.00

RUNS 581- 584, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	80.0	8.04	.32	84.0	7.65	.13	86.6	7.75	.20	87.4	7.16	.10	88.1	7.46	.02
630	76.5	7.66	.31	80.0	6.81	.28	83.7	7.27	.11	84.5	7.27	.18	84.3	6.97	.10
1250	72.0	7.43	.30	76.4	7.62	.24	80.1	7.66	.09	81.7	7.88	.16	82.5	8.02	.13
2500	66.4	7.56	.16	72.5	7.89	.10	76.7	8.23	.06	78.7	8.02	.13	80.1	8.22	.11
5000	59.0	8.06	.21	65.8	7.77	.29	70.7	7.79	.20	75.3	8.55	.05	75.8	8.40	.02
OASPL	92.7	5.58	.12	97.1	5.62	.17	99.6	5.60	.04	100.8	5.94	.04	100.7	5.89	.10

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.9	7.43	.18	89.8	7.63	.22	87.9	7.70	.23	86.9	7.82	.27	85.4	8.07	.06	.0	.00	.00
630	85.3	7.38	.24	86.2	7.81	.19	86.4	7.80	.10	84.7	7.52	.18	82.3	8.15	.20	.0	.00	.00
1250	82.5	7.96	.01	83.5	8.11	.05	82.9	8.18	.17	82.0	8.18	.20	79.2	7.87	.16	.0	.00	.00
2500	80.9	8.39	.17	82.2	8.73	.09	80.2	8.25	.23	79.7	8.48	.09	76.5	8.28	.27	.0	.00	.00
5000	76.5	8.18	.20	77.9	8.14	.14	77.1	8.76	.05	74.7	8.29	.08	71.3	8.43	.21	.0	.00	.00
OASPL	101.0	6.14	.17	101.0	6.34	.09	100.8	6.51	.05	99.3	6.68	.13	97.9	6.96	.09	.0	.00	.00

TABLE A-I.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER

RUNS 585- 588, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	87.7	6.24	.20	92.9	6.86	.16	95.7	6.44	.05	96.4	6.34	.25	97.1	6.54	.16
630	85.4	7.81	.19	89.8	8.13	.26	92.3	7.98	.19	93.2	6.99	.35	93.3	7.58	.43
1250	82.0	7.71	.19	87.4	8.43	.15	89.6	9.57	.37	89.7	8.24	.22	90.1	8.54	.21
2500	76.6	7.68	.04	82.9	7.87	.09	85.0	8.50	.15	87.0	8.64	.34	87.8	8.88	.18
5000	68.9	7.15	.17	76.1	7.12	.14	79.5	7.83	.29	83.6	8.10	.07	83.4	7.80	.12
OASPL	101.7	5.13	.06	108.8	5.85	.26	109.5	5.60	.04	109.7	5.36	.16	109.6	5.46	.06

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	97.7	6.71	.35	98.2	7.13	.10	95.8	6.96	.21	94.4	7.53	.37	89.0	6.63	.04	.0	.00	.00
630	93.5	7.30	.12	93.1	7.41	.14	93.0	7.22	.17	90.2	7.80	.14	85.9	7.65	.18	.0	.00	.00
1250	90.3	8.20	.23	90.5	8.26	.12	89.2	7.88	.19	85.9	7.69	.18	82.4	7.40	.30	.0	.00	.00
2500	88.3	8.54	.04	88.5	8.11	.17	86.4	8.03	.13	83.7	7.99	.19	79.8	7.83	.19	.0	.00	.00
5000	84.7	8.31	.13	85.3	8.32	.07	83.0	7.54	.20	79.3	8.02	.26	75.1	7.77	.13	.0	.00	.00
OASPL	109.6	5.52	.08	109.5	5.81	.02	108.8	5.82	.25	106.6	6.50	.16	104.1	7.34	.18	.0	.00	.00

RUNS 589- 592, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	87.7	6.58	.21	92.5	6.92	.12	95.7	6.93	.28	96.1	6.20	.14	96.3	6.56	.18
630	85.9	8.24	.22	89.5	8.27	.33	91.7	8.03	.13	92.4	7.05	.16	92.7	7.32	.17
1250	82.3	8.40	.08	86.8	8.89	.29	89.1	9.26	.17	89.6	8.99	.16	90.0	8.85	.11
2500	76.1	7.28	.11	82.3	8.10	.07	84.9	8.78	.11	86.8	8.71	.22	87.3	8.80	.16
5000	68.2	6.69	.04	75.3	7.17	.08	79.4	7.85	.04	83.3	8.24	.14	83.5	8.74	.13
OASPL	101.2	5.48	.11	106.1	6.10	.28	109.2	6.30	.05	109.5	5.91	.06	109.8	6.02	.09

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	97.5	7.08	.11	98.6	6.24	.20	98.3	7.43	.21	94.1	7.80	.38	88.4	6.48	.28	.0	.00	.00
630	93.1	7.25	.07	92.8	7.58	.14	92.9	7.56	.12	89.6	7.93	.03	84.9	7.60	.08	.0	.00	.00
1250	89.9	7.72	.32	90.4	8.48	.09	89.0	7.84	.13	86.0	8.25	.08	81.8	7.45	.10	.0	.00	.00
2500	87.8	8.01	.04	88.5	8.51	.27	86.2	8.05	.12	83.5	8.39	.14	78.9	7.61	.17	.0	.00	.00
5000	83.9	8.06	.09	84.6	8.10	.07	83.3	8.18	.07	78.7	7.86	.19	74.6	7.72	.24	.0	.00	.00
OASPL	109.7	8.74	.07	109.5	5.73	.06	108.2	6.28	.25	107.0	6.53	.18	104.2	7.15	.24	.0	.00	.00

RUNS 593- 596, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	87.8	7.19	.23	92.5	6.63	.15	96.4	6.82	.13	97.0	5.66	.18	97.3	6.33	.31
630	85.2	7.71	.19	89.6	7.43	.22	91.9	7.14	.16	93.5	6.93	.16	93.7	7.24	.08
1250	79.8	8.84	.22	84.5	8.99	.19	86.6	9.16	.17	86.9	8.70	.28	87.5	8.87	.28
2500	73.1	8.98	.29	79.2	9.36	.30	81.5	9.13	.02	83.1	9.16	.42	84.2	9.35	.18
5000	64.2	8.03	.38	71.0	8.51	.27	75.1	8.80	.15	78.5	8.23	.26	79.0	8.69	.15
OASPL	100.4	5.48	.10	104.8	5.82	.17	108.0	5.34	.00	108.8	5.22	.20	108.7	5.83	.12

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	98.3	6.51	.04	98.6	6.12	.19	98.1	6.59	.34	91.1	7.62	.41	85.1	7.19	.24	.0	.00	.00
630	93.6	6.60	.18	91.2	5.77	.19	91.2	7.07	.23	86.9	7.57	.34	82.7	7.80	.57	.0	.00	.00
1250	87.5	8.58	.11	87.0	8.14	.14	86.1	8.22	.14	83.6	8.26	.28	79.6	8.04	.33	.0	.00	.00
2500	85.0	9.09	.21	84.4	8.45	.33	83.0	8.69	.15	80.5	8.68	.36	76.2	8.46	.38	.0	.00	.00
5000	79.6	8.46	.35	80.3	8.07	.45	79.1	8.83	.34	75.4	8.45	.56	71.2	8.81	.34	.0	.00	.00
OASPL	109.0	5.46	.12	107.7	6.17	.12	107.2	5.89	.22	105.4	6.42	.28	101.0	6.73	.17	.0	.00	.00

RUNS 597- 600, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.1	6.88	.13	88.3	7.37	.46	91.6	7.06	.35	92.4	6.94	.13	93.3	7.46	.14
630	80.9	8.06	.23	84.7	7.91	.29	87.7	8.44	.33	88.8	8.04	.36	88.8	7.98	.11
1250	75.9	8.77	.19	80.5	8.47	.43	83.6	9.06	.29	84.1	8.38	.31	85.1	8.73	.22
2500	69.1	8.10	.30	75.2	8.28	.43	78.6	8.35	.26	81.1	8.66	.32	81.9	8.73	.22
5000	60.6	7.38	.34	67.6	7.34	.27	72.7	7.83	.28	76.7	8.06	.23	77.1	8.27	.14
OASPL	98.3	4.93	.08	103.0	5.39	.29	106.7	5.64	.12	107.4	5.84	.12	107.1	6.63	.19

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	93.4	6.71	.11	93.5	6.61	.15	92.2	7.27	.11	90.7	7.41	.25	88.9	7.63	.19	.0	.00	.00
630	89.4	7.48	.24	89.5	7.61	.08	89.6	8.03	.13	88.2	8.21	.26	84.2	7.93	.22	.0	.00	.00
1250	85.1	8.54	.21	85.7	8.15	.24	85.7	8.72	.34	84.0	8.49	.31	81.0	8.14	.27	.0	.00	.00
2500	82.7	8.45	.25	83.4	8.48	.12	82.4	8.78	.16	81.2	8.51	.02	77.7	8.30	.15	.0	.00	.00
5000	77.7	7.93	.15	79.6	8.53	.26	78.8	8.55	.34	76.2	8.48	.40	72.2	8.00	.24	.0	.00	.00
OASPL	107.2	5.77	.19	107.3	5.89	.14	106.7	8.59	.16	104.4	5.24	.20	102.8	5.93	.19	.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 601- 604, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	76.8	7.59	.06	82.0	7.99	.18	84.2	7.35	.20	86.0	7.99	.18	86.7	8.12	.03
630	74.6	7.74	.16	78.8	7.68	.11	82.0	7.70	.06	83.3	7.41	.16	83.9	7.46	.02
1250	70.9	7.64	.03	75.7	8.29	.19	79.3	8.16	.07	80.9	7.94	.12	81.8	8.09	.31
2500	66.1	8.00	.31	72.4	8.32	.11	75.8	8.05	.12	78.4	8.42	.23	79.7	8.21	.07
5000	58.8	7.99	.18	66.1	8.28	.05	71.2	8.51	.02	75.3	8.48	.17	75.7	8.49	.13
OASPL	91.5	6.13	.04	96.6	6.46	.09	98.6	6.00	.12	100.0	6.58	.04	100.8	6.92	.11

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.1	7.75	.20	87.6	7.89	.28	85.4	7.64	.03	85.7	7.86	.13	85.1	8.36	.09	.0	.00	.00
630	84.8	7.83	.23	85.4	7.72	.12	85.4	7.98	.07	84.7	8.57	.22	82.0	8.21	.07	.0	.00	.00
1250	82.1	8.02	.08	82.9	7.82	.06	82.2	8.07	.06	81.8	8.24	.14	79.4	8.28	.08	.0	.00	.00
2500	80.4	8.28	.11	81.5	8.10	.07	80.0	8.48	.19	79.1	8.29	.08	76.4	8.32	.11	.0	.00	.00
5000	76.5	8.18	.21	77.7	7.72	.13	76.6	8.44	.09	74.7	8.83	.14	71.8	8.00	.10	.0	.00	.00
OASPL	100.3	6.71	.18	100.4	7.05	.16	99.6	6.81	.09	98.4	6.99	.06	97.6	7.30	.01	.0	.00	.00

RUNS 605- 608, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.3	7.53	.08	96.0	6.74	.21	98.6	6.62	.26	98.1	6.33	.14	99.1	6.32	.20
630	86.8	7.60	.17	92.7	7.87	.16	93.6	7.43	.07	94.0	7.11	.24	93.5	7.18	.12
1250	81.8	8.84	.22	87.2	9.14	.15	88.3	8.93	.10	88.4	9.24	.21	88.4	8.65	.09
2500	75.2	9.03	.23	81.7	9.73	.13	83.6	9.35	.18	84.8	9.54	.09	85.4	9.34	.30
5000	66.3	8.09	.26	73.8	8.90	.16	76.9	8.50	.15	79.5	8.36	.13	80.0	8.50	.16
OASPL	101.6	5.73	.11	106.1	5.90	.10	107.7	5.53	.12	107.5	5.71	.06	107.3	5.73	.14

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.0	5.66	.09	95.6	5.94	.12	91.8	6.22	.22	86.0	5.90	.22	84.8	6.21	.08	.0	.00	.00
630	92.0	7.08	.11	90.8	7.68	.16	89.1	7.27	.11	83.0	7.18	.36	79.4	5.98	.39	.0	.00	.00
1250	88.0	8.47	.36	88.1	8.79	.15	86.0	8.04	.28	80.3	8.08	.32	75.3	6.33	.24	.0	.00	.00
2500	85.5	8.90	.31	85.6	8.67	.15	83.1	8.48	.40	77.7	9.01	.48	70.3	6.82	.02	.0	.00	.00
5000	80.5	8.47	.36	81.5	8.42	.33	79.6	8.41	.16	73.8	8.93	.35	64.6	6.79	.18	.0	.00	.00
OASPL	107.2	5.73	.14	105.8	6.09	.15	105.4	6.67	.27	100.2	6.54	.26	99.3	5.52	.03	.0	.00	.00

RUNS 614- 621, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.5	7.77	.31	95.3	6.41	.11	97.4	6.19	.08	98.3	6.26	.26	97.5	5.92	.15
630	87.3	7.62	.18	92.6	7.69	.13	93.3	6.95	.05	93.8	6.72	.12	92.1	6.94	.16
1250	82.5	8.76	.09	87.3	9.15	.13	88.5	8.79	.21	89.3	8.22	.10	88.8	8.23	.19
2500	76.3	9.16	.42	82.7	9.70	.12	85.2	9.63	.18	86.2	8.91	.26	86.5	9.02	.12
5000	68.2	8.69	.40	74.5	8.90	.16	78.3	8.63	.29	80.9	8.91	.30	81.1	8.73	.22
OASPL	101.7	5.48	.14	105.6	5.59	.03	106.8	5.44	.03	107.1	5.67	.03	106.2	5.80	[illegible]

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.7	5.76	.02	93.3	6.21	.28	88.3	6.83	.28	84.1	5.42	.28	91.8	6.84	.06	.0	.00	.00
630	91.0	7.35	.20	89.2	7.10	.18	87.6	7.37	.22	80.7	6.43	.20	86.9	6.41	.12	.0	.00	.00
1250	88.0	8.37	.14	86.4	7.64	.24	85.2	8.42	.11	77.5	6.98	.38	82.7	6.81	.27	.0	.00	.00
2500	85.5	8.87	.12	84.6	8.66	.37	82.6	9.31	.11	74.8	8.99	.88	77.4	7.14	.13	.0	.00	.00
5000	80.0	9.14	.26	80.3	8.66	.37	79.9	8.97	.28	66.1	7.16	.28	70.8	7.11	.12	.0	.00	.00
OASPL	105.9	6.15	.14	105.0	6.73	.17	103.0	6.83	.25	98.0	4.77	.07	106.5	7.81	.71	.0	.00	.00

RUNS 614- 621, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.9	6.71	.00	88.9	6.99	.05	91.8	6.68	.11	92.8	6.74	.12	92.8	6.95	.20
630	80.8	7.14	.08	85.1	6.25	.14	88.2	7.30	.14	88.9	7.33	.09	88.8	7.40	.14
1250	75.4	7.91	.29	81.2	7.97	.11	84.7	8.06	.24	85.9	8.57	.00	85.1	8.25	.07
2500	70.0	5.43	.33	76.5	9.01	.20	80.6	8.89	.14	82.4	8.83	.26	82.6	8.62	.09
5000	61.1	7.54	.15	68.3	8.10	.30	74.5	8.25	.33	77.7	9.17	.21	78.1	9.22	.15
OASPL	97.5	4.69	.09	101.0	4.92	.08	103.5	5.60	.04	103.6	5.87	.09	103.4	6.22	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG: SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.2	6.64	.11	90.6	6.74	.19	83.5	4.79	.50	87.5	5.59	.34	90.4	7.31	.31	.0	.00	.00
630	88.4	7.56	.19	86.3	7.12	.19	82.5	5.64	.65	83.9	5.77	.34	84.9	7.16	.33	.0	.00	.00
1250	84.6	8.11	.05	85.4	8.69	.15	80.2	6.60	1.08	81.7	7.80	.33	81.0	7.76	.55	.0	.00	.00
2500	82.4	8.86	.11	82.9	9.07	.00	78.2	7.65	1.05	77.0	8.54	.13	76.7	8.31	.63	.0	.00	.00
5000	76.6	5.61	.23	78.6	9.62	.27	75.5	7.49	1.16	65.4	5.25	1.33	69.3	8.05	.47	.0	.00	.00
OASPL	103.3	6.64	.07	102.8	7.28	.15	99.9	6.61	.37	99.4	5.64	.29	102.2	6.90	.45	.0	.00	.00

TABLE A-I.- CONTINUED.

RUNS 622- 629, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.0	7.01	.26	93.5	7.01	.24	97.2	6.21	.18	98.8	6.12	.23	99.8	6.58	.10
630	85.9	7.25	.13	90.3	8.83	.06	94.3	7.76	.31	95.5	7.33	.04	94.7	7.21	.29
1250	81.2	8.51	.27	85.5	9.01	.15	88.2	9.21	.16	89.1	9.01	.14	89.0	8.98	.04
2500	74.9	9.36	.30	80.0	9.41	.24	83.8	9.70	.44	84.5	9.58	.16	85.9	9.70	.44
5000	64.9	8.18	.20	71.3	8.55	.34	76.5	8.61	.46	78.9	8.89	.39	80.1	9.90	.35
OASPL	100.5	5.57	.06	104.2	5.52	.08	106.9	5.48	.03	107.8	5.83	.14	107.7	5.78	.06

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.7	5.31	.35	98.0	5.49	.30	94.4	6.10	.07							.0	100	.00
630	93.7	6.66	.26	91.9	6.76	.08	90.8	7.65	.18							.0	100	.00
1250	88.8	8.73	.07	88.9	8.50	.10	87.2	8.89	.39							.0	100	.00
2500	86.1	9.70	.26	86.0	8.76	.32	83.8	8.62	.17							.0	100	.00
5000	79.9	9.31	.37	80.7	8.82	.16	80.5	8.38	.08							.0	100	.00
OASPL	107.4	5.14	.11	106.8	5.80	.10	106.4	6.81	.29							.0	100	.00

RUNS 622- 629, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.2	7.12	.17	88.1	7.22	.18	90.1	7.03	.32	90.9	6.78	.10	91.2	6.82	.02
630	79.2	7.23	.07	84.3	7.45	.15	86.2	7.84	.13	87.6	7.52	.16	88.2	7.83	.15
1250	73.8	8.17	.07	80.4	8.39	.18	83.9	8.73	.38	85.0	8.70	.19	84.3	8.85	.25
2500	67.2	8.36	.13	75.3	9.11	.20	80.5	10.*	.38	81.4	9.36	.21	82.2	9.45	.22
5000	57.5	7.02	.20	66.3	7.91	.29	73.6	9.23	.42	75.7	9.02	.26	76.9	9.68	.38
OASPL	96.0	4.88	.06	99.4	5.14	.07	101.8	5.52	.13	102.2	5.84	.11	102.0	6.10	.11

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.2	6.40	.02	91.0	6.36	.23	87.6	6.53	.12	84.7	6.13	.49	87.7	8.49	.87	.0	100	.00
630	87.8	7.15	.29	86.7	7.49	.27	85.5	7.33	.09	80.7	6.02	.34	82.1	7.96	1.04	.0	100	100
1250	84.5	8.99	.19	83.9	7.83	.09	83.1	8.56	.12	78.4	7.11	.54	77.0	8.11	.86	.0	100	.00
2500	82.3	9.55	.31	81.7	8.71	.30	80.4	9.10	.39	76.2	8.32	.27	71.9	8.81	.62	.0	100	.00
5000	76.5	9.68	.37	76.8	8.57	.36	77.5	9.26	.12	70.2	7.74	.41	63.6	8.65	.69	.0	100	.00
OASPL	101.7	6.08	.14	101.2	6.31	.22	100.8	7.19	.18	99.4	7.16	.25	99.7	7.80	.43	.0	100	.00

RUNS 646- 667, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	71.7	6.78	.37	76.7	7.07	.35	79.6	6.76	.45	82.2	6.88	.43	83.2	6.92	.25
630	69.7	6.26	.30	74.9	7.12	.35	79.0	7.17	.37	80.8	7.27	.31	81.5	6.97	.36
1250	65.7	6.47	.32	71.8	7.80	.49	76.5	7.82	.34	78.2	7.32	.39	79.2	7.88	.36
2500	60.2	6.78	.39	67.9	7.73	.41	74.3	7.92	.39	75.6	7.67	.48	76.5	7.78	.35
5000	50.9	7.11	.46	60.7	7.33	.40	66.3	7.78	.44	70.0	7.93	.63	71.1	7.97	.36
OASPL	82.8	6.34	.26	87.3	6.67	.24	91.0	6.74	.34	93.2	6.70	.29	94.1	6.71	.29

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.7	6.97	.47	.0	.00	.00	84.1	8.21	.48	85.0	7.41	.37	83.8	8.00	.40	80.7	8.16	.28
630	82.1	7.04	.27	.0	.00	.00	83.8	7.69	.41	83.3	7.60	.32	82.3	8.22	.31	76.6	7.96	.41
1250	79.7	7.53	.43	.0	.00	.00	81.0	8.22	.43	80.8	7.72	.42	78.6	8.00	.41	72.7	7.75	.38
2500	77.4	7.72	.38	.0	.00	.00	80.4	8.47	.49	78.7	8.01	.43	75.3	8.07	.43	69.0	7.89	.42
5000	71.8	7.64	.36	.0	.00	.00	75.4	8.69	.49	73.2	7.94	.43	67.5	7.44	.66	59.4	7.63	.46
OASPL	94.9	6.80	.34	.0	.00	.00	96.1	7.50	.34	96.1	7.18	.32	95.9	7.69	.36	93.3	8.12	.31

RUNS 640- 667, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	64.4	6.47	.44							75.8	6.83	.42	76.7	6.51	.41
630	62.3	5.98	.40							73.7	6.72	.28	74.5	6.67	.51
1250	57.4	6.25	.29							70.9	7.02	.39	71.7	7.13	.57
2500	50.1	6.77	.35							67.2	7.33	.42	67.5	7.67	.54
5000	36.1	6.82	.49							58.2	7.12	.59	59.6	7.64	.34
OASPL	75.3	6.14	.35							86.2	6.54	.38	87.0	6.47	.37

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	77.3	6.91	.47	.0	.00	.00	76.5	7.17	.55	78.1	7.38	.47	76.4	7.86	.66	72.5	7.88	.37
630	75.3	7.16	.52	.0	.00	.00	76.3	7.26	.83	76.3	7.52	.44	74.9	7.72	.35	68.2	7.80	.47
1250	72.4	7.66	.48	.0	.00	.00	73.1	7.66	.53	72.9	7.53	.48	69.9	7.70	.66	63.7	7.83	.38
2500	68.6	7.80	.46	.0	.00	.00	71.9	8.53	.74	69.4	7.77	.48	64.8	7.49	.57	57.5	7.34	.46
5000	61.0	7.89	.51	.0	.00	.00	64.0	8.86	.70	60.8	7.87	.65	54.0	6.78	.58	43.0	7.46	.35
OASPL	87.6	6.63	.50	.0	.00	.00	86.6	7.19	.51	88.9	7.01	.47	88.3	7.47	.53	85.8	7.86	.45

TABLE A-I.- CONTINUED.

RUNS 640- 667, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	69.9	6.53	.35				.0	.00	.00	78.9	6.49	.51	80.1	6.79	.50
630	66.6	5.56	.35				.0	.00	.00	76.8	5.76	.22	77.9	6.79	.50
1250	63.6	6.22	.44				.0	.00	.00	74.8	7.19	.50	75.8	7.30	.58
2500	59.5	6.68	.47				.0	.00	.00	72.3	7.45	.62	72.8	7.45	.60
5000	49.7	6.93	.60				.0	.00	.00	66.2	7.22	.51	67.1	7.66	.45
OASPL	80.2	6.27	.36				.0	.00	.00	89.7	6.50	.44	90.7	6.47	.45

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	80.6	6.97	.63	.0	.00	.00	80.5	7.36	.54	82.4	7.32	.47	81.0	7.55	.59	78.2	8.10	.90
630	79.1	7.12	.54	.0	.00	.00	80.7	7.81	.62	80.5	7.52	.48	79.3	8.08	.41	73.8	7.82	.69
1250	76.0	7.22	.60	.0	.00	.10	77.5	8.08	.69	77.2	7.71	.50	74.8	7.55	.52	70.0	7.45	.51
2500	73.9	7.66	.50	.0	.00	.00	76.6	8.11	.62	75.0	8.07	.52	71.9	7.39	.84	66.4	7.35	.98
5000	68.0	7.86	.67	.0	.00	.00	71.7	8.49	.63	69.0	7.95	.54	63.7	6.75	.86	55.6	7.15	.73
OASPL	91.6	6.51	.45	.0	.00	.00	92.9	7.23	.46	93.3	7.02	.55	93.0	7.48	.43	91.1	7.85	.82

RUNS 640- 667, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	59.4	6.19	.54	15.2	1.62	22.*							81.4	7.16	.18
630	64.7	5.58	.34	14.4	1.53	21.*							79.1	6.78	.38
1250	60.0	5.91	.29	13.4	1.43	20.*							77.0	7.13	.41
2500	54.3	6.06	.34	12.6	1.33	18.*							73.8	7.13	.46
5000	45.1	6.76	.36	11.1	1.18	16.*							69.2	5.80	2.47
OASPL	80.5	6.32	.34	17.5	1.86	26.*							92.1	6.60	.35

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	82.0	7.07	.56	.0	.00	.00	81.5	7.32	.61	83.4	7.42	.48				77.1	7.41	.89
630	80.0	6.87	.59	.0	.00	.00	81.8	7.56	.62	81.0	7.28	.61				72.7	7.25	.60
1250	77.4	7.27	.60	.0	.00	.00	78.4	7.97	.62	78.6	7.91	.46				68.3	7.25	.64
2500	75.0	7.52	.63	.0	.00	.00	78.0	8.07	.70	76.1	7.68	.64				64.4	6.84	.46
5000	70.0	7.72	.70	.0	.00	.00	73.1	8.20	.62	70.9	7.91	.53				55.4	7.01	.34
OASPL	93.0	6.68	.53	.0	.00	.00	94.2	7.19	.50	94.6	7.05	.46				91.4	7.79	.48

TABLE A-I.- CONCLUDED.

MID FREQ. 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER

RUNS 173- 202, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	69.4	3.16	.25	72.9	3.10	.31	77.3	3.81	.19	78.1	3.94	.36	78.8	3.49	.37
630	68.1	3.59	.17	73.1	3.61	.37	75.9	4.80	.25	77.1	4.39	.32	77.5	4.54	.42
1250	63.4	3.66	.56	66.4	4.43	.74	71.3	5.32	.51	73.8	5.67	.78	73.9	5.83	.67
2500	60.3	3.41	1.06	63.5	4.28	.63	70.2	4.89	.50	71.4	5.35	.49	73.1	5.28	.46
5000	56.6	5.47	.32	60.4	5.79	.14	68.4	6.47	.23	67.3	6.27	.27	70.9	6.56	.27
OASPL	82.6	4.22	.18	87.0	4.21	.11	90.6	4.52	.07	91.4	4.16	.14	91.3	4.02	.24

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	80.1	4.25	.23	80.6	4.30	.38	80.0	4.32	.48	79.9	4.79	.20	77.4	5.04	.13			
630	78.8	5.41	.24	79.2	5.47	.43	79.4	5.35	.45	78.7	6.02	.15	76.5	5.80	.24			
1250	74.9	6.34	.50	76.4	6.51	.70	77.0	6.78	.75	76.3	7.04	.22	74.0	6.52	.39			
2500	74.1	6.19	.95	75.5	6.29	.79	76.3	6.37	.76	75.9	6.47	.48	72.7	5.33	.55			
5000	70.5	7.31	.26	71.9	7.39	.45	73.7	7.50	.58	73.9	7.55	.23	68.4	6.22	.33			
OASPL	92.3	4.50	.12	92.6	4.51	.39	92.6	4.64	.41	91.4	5.11	.15	89.3	5.13	.30			

RUNS 173- 202, MICROPHONES 60 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	62.3	3.16	.34	66.5	3.08	.43	69.7	3.75	.30	71.0	3.92	.26	72.4	3.76	.45
630	60.0	3.57	.22	65.9	3.68	.16	68.8	4.77	.18	70.0	4.43	.18	70.0	4.58	.35
1250	53.4	3.61	.55	59.6	4.49	.44	63.2	5.41	.65	66.3	5.60	.62	66.4	5.77	.78
2500	48.6	3.31	1.15	55.1	4.25	.75	61.1	4.87	.76	62.7	5.31	.48	64.0	5.41	.57
5000	41.4	5.43	.37	48.4	5.72	.33	56.3	6.52	.35	56.5	6.53	.17	59.8	6.44	.23
OASPL	75.6	4.06	.23	79.7	3.91	.27	82.6	4.21	.14	83.9	4.18	.13	84.1	3.96	.07

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	72.6	4.20	.13	73.9	4.42	.44	73.1	4.36	.47	73.0	4.88	.18	70.5	4.91	.22	67.1	5.46	.21
630	71.8	5.49	.21	71.7	5.45	.46	72.2	5.55	.46	71.2	5.93	.16	69.2	5.67	.23	65.2	5.84	.20
1250	67.5	6.27	.47	68.3	6.32	.73	69.0	6.57	.87	68.6	7.08	.12	65.5	6.30	.42	60.9	6.49	.47
2500	65.5	6.22	.74	66.9	6.29	.69	67.5	6.29	.94	66.3	6.23	.58	62.4	5.39	.29	56.9	5.72	.95
5000	58.9	7.18	.22	60.6	7.50	.71	62.0	7.42	.66	61.5	7.61	.20	55.2	6.38	.47	42.3	6.51	.12
OASPL	84.8	4.40	.15	85.1	4.38	.36	85.1	4.60	.40	84.0	5.06	.10	82.0	4.88	.22	78.8	5.53	.16

RUNS 173- 202, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	67.6	3.51	.31	70.7	2.87	.40				75.6	4.08	.25	76.7	3.82	.39
630	64.0	3.44	.22	71.1	3.72	.13				74.7	4.70	.23	75.0	4.92	.36
1250	59.1	3.53	.43	64.3	4.33	.49				71.0	5.50	.79	70.9	5.89	.69
2500	55.7	3.50	.87	61.7	4.25	.98				68.4	5.53	.64	69.5	5.76	.67
5000	52.5	5.41	.56	58.0	5.66	.25				64.7	6.61	.16	66.9	6.80	.18
OASPL	79.3	4.12	.19	83.8	3.99	.19				88.0	4.09	.09	88.3	4.03	.13

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	77.1	4.12	.14	77.9	4.22	.45	77.9	4.55	.59	77.8	4.88	.13	75.5	5.06	.33	73.9	5.82	.11
630	76.4	5.64	.18	76.1	5.47	.35	77.0	5.67	.75	76.3	5.96	.10	73.8	5.44	.33	72.0	6.58	.49
1250	72.3	6.43	.38	73.2	6.43	.80	74.2	6.67	.66	73.6	7.05	.15	71.8	6.48	.30	68.0	6.85	.48
2500	71.2	6.60	.54	72.6	6.35	.82	73.4	6.38	.56	72.9	6.43	.77	70.5	5.96	.73	66.1	6.12	.81
5000	67.7	7.73	.28	68.6	7.37	.54	70.6	7.57	.66	70.4	7.59	.20	65.7	6.44	.37	58.3	6.74	.20
OASPL	89.2	4.52	.05	89.4	4.52	.31	89.6	4.74	.51	89.0	5.17	.16	87.2	4.99	.41	84.8	5.73	.31

RUNS 173- 202, MICROPHONES 0 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	66.9	3.34	.25	71.2	3.15	.23				75.5	3.91	.19	77.6	4.03	.26
630	63.3	2.94	.53	68.4	3.25	.24				74.5	4.62	.26	75.6	4.93	.22
1250	56.9	3.40	.47	63.5	4.00	.51				71.2	5.88	.51	71.3	5.93	.56
2500	53.7	3.55	.47	60.2	4.03	.42				68.6	5.92	.47	70.4	6.08	.58
5000	49.6	5.28	.37	56.5	5.47	.53				64.0	6.57	.12	68.8	6.87	.24
OASPL	80.4	4.16	.18	84.1	4.05	.36				58.5	4.04	.26	88.6	4.02	.24

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	78.0	4.13	.13	78.5	4.11	.41	78.3	4.51	.45	77.7	4.77	.15	75.4	4.77	.46			
630	77.0	5.53	.11	77.2	5.53	.46	78.2	5.67	.36	76.9	5.86	.14	73.4	5.15	.35			
1250	73.2	6.37	.31	74.1	6.41	.80	75.2	6.61	.79	74.1	6.93	.21	70.7	5.83	.33			
2500	71.6	6.54	.40	73.2	6.37	.85	74.5	6.38	.67	73.5	6.30	.66	69.0	4.80	.70			
5000	68.4	7.60	.22	70.2	7.39	.62	72.1	7.58	.61	71.6	7.51	.21	64.6	5.07	.26			
OASPL	89.1	4.44	.14	89.6	4.43	.61	89.9	4.76	.46	89.7	5.26	.25	87.5	5.14	.59			

TABLE A-II.- ABBREVIATED STATIC-TEST SPECTRA. FULL SCALE, 152.4-M (500-FT) SIDELINE OR FLYOVER. TEST SERIES 2.

RUNS 230- 239, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	69.9	3.23	.06	73.6	3.23	.19	77.9	3.62	.25	78.8	4.49	.19	79.9	4.25	.13
630	69.9	3.62	.00	74.6	4.41	.25	77.9	4.80	.19	79.5	4.57	.00	80.1	5.20	.25
1250	65.6	5.20	.13	70.4	5.14	.13	75.1	6.62	.25	77.5	6.85	.06	77.9	6.54	.19
2500	60.2	3.07	.59	66.7	4.88	.63	72.9	5.51	.37	73.6	5.36	.35	75.2	5.51	.25
5000	53.9	5.51	.00	62.2	5.75	.19	67.9	5.59	.19	68.0	6.46	.13	71.5	6.62	.25
OASPL	82.9	4.30	.06	86.6	4.17	.02	90.1	4.36	.18	91.4	4.43	.11	92.2	4.67	.06

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	80.8	4.02	.19	81.9	4.69	.13	82.1	5.25	.06	80.6	4.73	.13	78.9	5.64	.13	74.0	4.67	.19
630	81.1	5.20	.13	81.4	5.56	.19	81.5	5.56	.06	79.8	5.12	.06	78.3	6.11	.00	72.9	5.14	.19
1250	78.3	5.77	.13	79.6	6.74	.13	79.9	7.14	.19	78.0	6.54	.06	76.7	7.45	.19	70.5	6.50	.31
2500	76.8	5.12	.19	78.2	5.80	.30	78.8	6.51	.19	76.8	5.04	.38	74.5	5.40	.19	66.7	2.86	.80
5000	73.3	6.62	.13	76.0	7.77	.19	75.4	7.92	.06	74.1	7.01	.06	71.0	7.53	.13	60.0	5.93	.19
OASPL	92.8	4.56	.08	93.6	5.20	.04	93.8	5.35	.16	92.1	5.09	.06	90.9	6.18	.04	86.6	5.67	.06

RUNS 240- 259, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	68.3	3.96	.23	72.5	4.07	.19	76.3	3.38	.22	78.0	4.09	.49	78.6	3.31	.29
630	69.1	4.94	.12	73.6	5.13	.17	78.1	5.21	.25	79.8	5.46	.21	79.5	5.06	.09
1250	66.6	6.15	.31	72.0	6.95	.13	77.4	7.28	.13	80.5	7.27	.19	79.9	6.70	.16
2500	63.8	5.76	.35	70.9	7.01	.28	77.3	6.84	.14	78.8	7.36	.30	79.0	6.50	.19
5000	56.8	6.74	.11	66.8	7.73	.14	71.2	7.16	.16	73.4	8.16	.25	75.7	7.50	.14
OASPL	80.7	5.08	.17	84.9	5.16	.11	89.3	5.13	.12	92.0	5.75	.24	92.3	5.21	.07

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	79.9	4.21	.24	81.2	5.54	.35	80.9	5.88	.21	79.7	5.44	.15	79.9	6.79	.17	76.5	5.07	.15
630	80.0	5.06	.16	81.9	6.31	.32	81.8	6.32	.27	81.2	6.06	.10	79.5	6.97	.30	74.6	6.19	.15
1250	79.7	6.70	.19	81.6	7.29	.16	81.7	7.50	.23	79.9	6.66	.23	79.3	7.84	.38	73.4	6.79	.19
2500	80.3	6.89	.14	82.0	7.42	.15	82.1	7.39	.21	80.4	6.98	.26	78.5	7.20	.59	71.0	6.43	.48
5000	77.3	7.43	.24	79.6	8.67	.29	79.6	8.78	.24	77.6	8.31	.20	74.7	8.74	.55	64.6	7.77	.33
OASPL	93.0	5.23	.07	94.6	5.98	.16	94.6	5.96	.16	93.1	5.76	.05	92.1	6.50	.32	87.3	5.05	.23

RUNS 240- 259, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	61.6	4.11	.22	65.9	4.01	.13	68.9	3.74	.09	71.0	4.48	.40	71.3	3.25	.17
630	59.7	4.35	.09	66.6	5.02	.39	70.7	4.97	.12	72.9	5.67	.23	72.5	5.16	.07
1250	56.7	5.80	.25	63.9	7.07	.23	69.7	7.39	.14	73.1	7.33	.22	72.4	6.51	.21
2500	52.8	6.29	.27	61.2	7.14	.09	67.9	6.52	.13	69.9	7.57	.20	70.5	6.95	.05
5000	41.8	7.11	.15	53.0	7.82	.19	59.3	7.15	.11	61.7	8.27	.34	64.6	7.53	.08
OASPL	74.7	6.23	.52	77.6	4.90	.03	81.7	5.15	.05	84.5	5.62	.21	84.9	5.19	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	72.7	4.57	.21	73.6	5.24	.20	73.9	6.00	.19	73.4	6.06	.14	73.7	7.18	.26	67.8	5.78	.21
630	73.2	5.47	.18	74.0	6.03	.18	75.2	6.84	.22	73.9	6.35	.17	72.8	7.02	.43	67.4	6.44	.26
1250	72.6	6.58	.10	74.4	7.29	.13	74.4	7.64	.18	72.8	7.00	.14	71.5	7.84	.19	64.6	6.96	.15
2500	71.6	7.02	.29	72.9	6.71	.25	73.2	7.18	.26	71.0	6.99	.15	69.1	7.33	.21	60.3	6.47	.39
5000	66.5	7.95	.11	68.2	8.19	.30	68.5	9.19	.13	65.4	6.15	.12	61.8	8.89	.18	49.2	8.10	.09
OASPL	85.2	5.22	.05	86.5	5.92	.14	86.7	6.13	.21	85.4	5.87	.05	85.0	6.70	.16	79.8	5.91	.13

RUNS 240- 259, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	-7.8	-44*	12.*	70.5	4.12	.06				75.0	4.43	.44	75.2	3.49	.20
630	-7.7	-43*	12.*	72.5	4.92	.06				76.9	5.77	.24	76.3	5.52	.11
1250	-6.9	-39*	11.*	69.9	6.93	.28				77.3	6.86	.31	77.0	7.09	.24
2500	-6.7	-38*	11.*	68.8	5.41	.44				75.8	7.29	.36	75.8	7.31	.28
5000	-5.4	-32*	9.81	62.3	7.23	.04				70.0	8.17	.37	72.4	7.59	.26
OASPL	-9.2	-52*	15.*	82.8	5.16	.09				89.0	5.78	.30	89.5	5.82	.07

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	77.0	4.42	.25	78.9	5.33	.30	78.5	5.70	.31	77.6	5.92	.16	78.3	7.06	.02	74.5	6.21	.13
630	77.8	5.58	.11	79.2	6.22	.20	79.6	6.53	.17	78.7	6.29	.02	78.0	6.95	.13	74.4	7.11	.24
1250	77.2	6.49	.10	79.8	7.59	.19	79.2	7.37	.30	77.8	7.15	.17	77.6	7.62	.15	71.2	7.06	.15
2500	77.7	7.39	.14	79.5	6.81	.17	79.8	6.23	.30	77.4	7.29	.19	77.0	7.58	.09	69.1	6.35	.63
5000	74.4	7.58	.13	76.9	8.46	.27	77.2	8.80	.28	74.0	8.19	.05	72.8	8.89	.18	61.4	7.43	.17
OASPL	90.3	5.44	.05	92.1	6.10	.11	91.9	6.09	.12	90.4	6.14	.05	90.8	6.95	.11	85.9	5.09	.26

TABLE A-II.- CONTINUED.

ORIGINAL PAGE IS OF POOR QUALITY

RUNS 240- 259, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	.0	.00	.00	70.8	3.87	.13	73.7	3.74	.09	75.2	4.53	.32	76.2	3.86	.20
630	.0	.00	.00	70.0	5.06	.04	73.7	5.62	.12	76.5	5.76	.37	76.9	5.16	.07
1250	.0	.00	.00	68.1	6.38	.12	71.4	6.80	.19	77.1	7.27	.41	77.5	6.76	.26
2500	.0	.00	.00	65.9	6.79	.22	71.3	7.29	.19	75.6	8.13	.34	76.9	7.50	.26
5000	.0	.00	.00	60.5	7.37	.11	64.7	7.18	.12	70.4	8.80	.33	73.8	7.89	.07
OASPL	.0	.00	.00	82.5	5.31	.30	85.4	4.90	.16	89.1	5.72	.24	90.3	5.11	.40

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	77.3	4.06	.13	78.8	5.24	.20	79.1	5.78	.22	77.5	5.58	.14				71.6	5.83	.33
630	78.4	5.35	.02	79.7	6.62	.15	80.3	6.83	.14	79.7	6.45	.17				71.6	6.14	.31
1250	78.0	6.84	.16	79.6	7.73	.13	79.2	7.25	.05	78.9	7.19	.09				69.8	7.18	.16
2500	78.2	6.82	.44	79.6	7.64	.18	80.4	7.92	.14	78.0	7.00	.14				67.9	6.81	.21
5000	75.6	7.76	.19	78.4	9.06	.41	78.2	9.00	.08	75.7	8.24	.11				61.7	8.12	.38
OASPL	90.7	5.22	.14	92.3	8.32	.14	92.3	6.47	.15	91.3	6.01	.07				85.0	6.10	.26

RUNS 260- 284, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	72.5	4.98	.41	76.9	5.85	.33	82.2	7.10	.16	82.7	6.66	.38	84.0	6.64	.26
630	68.4	3.82	.60	73.6	4.65	.45	79.1	6.32	.41	80.7	5.99	.52	81.0	5.74	.39
1250	64.5	4.13	.65	70.6	5.34	.42	77.9	7.33	.33	81.1	7.47	.54	83.2	7.61	.27
2500	60.2	5.60	.56	68.0	6.64	.40	76.1	8.22	.22	77.7	7.98	.32	78.7	7.59	.31
5000	52.9	6.58	.44	62.6	7.38	.31	69.2	8.52	.25	71.4	8.33	.36	73.2	7.87	.33
OASPL	83.1	4.54	.32	87.9	5.10	.24	93.1	6.35	.16	94.6	6.09	.37	95.7	5.98	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	85.5	6.94	.31	87.1	7.50	.42	86.9	7.55	.43	86.2	7.23	.26						
630	82.9	6.42	.49	84.4	6.83	.55	84.9	6.92	.46	83.2	6.55	.46						
1250	83.3	8.10	.23	84.9	8.30	.19	85.0	8.32	.33	83.2	7.95	.14						
2500	79.5	8.01	.25	81.3	8.33	.41	81.8	8.37	.39	79.7	8.00	.23						
5000	74.1	8.18	.19	78.8	8.29	.31	77.6	8.71	.36	74.9	8.26	.21						
OASPL	97.2	6.56	.23	98.9	7.04	.37	99.2	7.14	.38	97.9	6.85	.17						

RUNS 260- 284, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	64.9	4.87	.40	70.7	6.15	.45	74.1	6.77	.27	75.9	6.87	.34	77.3	6.77	.32
630	60.0	3.37	.49	66.7	4.59	.64	70.8	5.88	.40	73.0	5.95	.66	74.4	6.05	.31
1250	55.5	3.90	.59	64.1	5.67	.63	69.0	7.03	.42	74.1	7.66	.36	75.3	7.48	.31
2500	49.4	5.43	.48	59.9	6.99	.39	66.0	8.02	.32	68.5	8.01	.32	69.7	7.61	.27
5000	37.6	6.74	.34	51.0	7.71	.29	56.5	8.37	.29	60.0	8.51	.13	61.7	7.83	.28
OASPL	75.8	4.46	.31	81.4	5.32	.25	85.7	6.29	.12	87.5	6.13	.41	88.6	6.02	.23

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	78.4	7.12	.28	80.9	7.76	.61	79.5	7.60	.29	79.6	7.40	.19						
630	75.6	6.50	.34	76.9	6.83	.53	76.9	6.76	.80	75.9	6.55	.45						
1250	75.8	8.02	.17	77.9	8.39	.33	77.2	8.20	.15	75.1	7.95	.16						
2500	70.1	7.85	.33	71.7	8.04	.50	73.1	8.35	.38	70.1	7.99	.25						
5000	62.9	8.32	.19	64.5	8.29	.45	65.6	8.61	.34	62.4	8.31	.25						
OASPL	89.8	6.63	.20	91.5	7.06	.34	91.5	7.08	.29	91.0	7.04	.17						

RUNS 260- 284, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	70.2	5.45	.34	75.2	6.13	.30							81.6	6.73	.35
630	63.9	3.16	.49	71.0	4.65	.39							79.8	6.22	.40
1250	60.7	3.58	.62	68.4	5.49	.61							78.8	7.32	.35
2500	55.9	5.03	.54	65.1	6.51	.48							74.4	7.35	.32
5000	47.9	6.34	.43	58.9	7.39	.33							69.5	7.75	.31
OASPL	79.8	4.38	.41	85.1	5.25	.32							93.0	8.04	.23

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	82.7	7.10	.48	84.3	7.41	.58	84.2	7.41	.42	83.7	7.27	.20				79.2	7.29	.38
630	81.1	6.78	.32	82.5	7.05	.54	82.7	6.99	.63	81.6	8.80	.29				76.3	7.10	.85
1250	80.0	7.91	.26	82.1	8.13	.45	82.2	8.10	.36	81.5	8.39	.23				72.9	7.38	.52
2500	83.6	10.*	1.96	78.6	8.36	.41	79.2	8.20	.54	76.9	8.04	.14				67.0	7.09	.52
5000	70.5	8.08	.19	72.8	8.30	.41	74.5	8.59	.58	72.0	8.46	.09				57.8	7.11	.19
OASPL	94.2	6.64	.27	98.8	6.99	.45	96.2	7.06	.42	95.8	7.08	.21				91.8	6.99	.36

TABLE A-II.- CONTINUED.

RUNS 260- 264, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315							78.4	6.66	.32						
630							73.6	5.39	.50						
1250							71.7	6.67	.59						
2500							69.6	7.46	.36						
5000							63.0	8.03	.38						
OASPL							90.0	6.08	.33						

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315				88.6	7.40	.26	88.3	7.49	.36	84.8	7.98	.20						
630				83.2	7.20	.38	84.0	7.20	.69	81.9	6.47	.80						
1250				83.1	8.32	.36	82.9	8.24	.12	81.8	8.13	.18						
2500				79.2	8.38	.29	80.8	8.84	.28	77.9	8.06	.18						
5000				74.1	8.29	.29	78.8	8.64	.63	73.3	8.26	.18						
OASPL				96.4	6.94	.38	96.8	7.09	.40	96.4	6.93	.22						

RUNS 291- 298, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.4	7.26	.20	92.2	7.56	.40	95.7	7.26	.07	96.1	5.80	.09	98.5	6.92	.23
630	84.4	7.41	.25	90.5	5.26	.16	91.8	7.68	.07	93.4	7.14	.23	94.6	7.40	.29
1250	79.6	9.13	.02	84.5	9.70	.41	85.4	9.26	.37	87.2	9.08	.23	88.7	9.44	.30
2500	72.0	9.11	.31	78.6	10.[illegible]	.18	81.3	9.64	.26	82.5	9.15	.30	84.3	9.69	.14
5000	61.6	5.22	.21	69.9	9.44	.23	71.3	8.46	.28	73.6	8.11	.41	77.9	9.16	.22
OASPL	99.7	5.69	.05	104.2	6.57	.16	105.6	6.00	.13	106.2	5.33	.13	107.4	6.07	.08

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.5	5.61	.15	97.6	5.09	.28	95.5	5.48	.11	91.5	7.85	.26	85.3	7.26	.18	.0	.00	.00
630	92.9	6.96	.39	91.6	6.59	.46	90.0	6.35	.33	87.4	8.22	.20	84.2	8.44	.21	.0	.00	.00
1250	88.8	9.24	.06	87.0	8.50	.10	90.3	11.[illegible]	1.67	83.5	9.03	.16	80.4	8.74	.38	.0	.00	.00
2500	83.0	9.55	.32	84.3	8.92	.18	84.1	8.53	.30	80.8	9.12	.23	77.0	8.76	.29	.0	.00	.00
5000	75.2	8.64	.35	77.6	8.25	.45	79.2	8.23	.61	75.0	8.52	.17	69.7	9.23	.30	.0	.00	.00
OASPL	106.7	5.89	.06	106.0	5.45	.25	105.5	5.78	.38	104.2	8.04	.27	101.9	8.06	.24	.0	.00	.08

RUNS 291- 298, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.3	7.85	.33	86.3	7.74	.20	87.7	7.15	.12	88.7	6.66	.15	91.9	7.89	.24
630	79.4	8.21	.19	85.1	8.12	.11	84.7	8.00	.25	83.1	.78	2.60	87.9	8.44	.06
1250	73.0	8.92	.14	80.9	9.25	.07	81.9	9.40	.33	83.8	8.44	.11	88.1	9.44	.23
2500	66.5	9.26	.19	75.4	9.99	.10	75.1	9.89	.20	79.2	9.06	.17	80.6	9.98	.21
5000	56.6	8.74	.15	65.7	8.82	.14	67.7	8.58	.29	71.0	8.39	.09	74.9	10.[illegible]	.38
OASPL	95.0	5.83	.16	90.2	6.02	.17	100.3	5.82	.02	101.2	4.97	.15	102.7	6.89	.19

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.0	6.81	.17	90.7	8.81	.27	89.8	7.17	.51	85.6	7.24	.11	79.7	6.46	.33	83.2	7.88	.81
630	88.9	7.38	.05	86.6	8.99	.08	86.5	7.50	.11	84.1	7.96	.08	77.4	7.17	.86	77.2	8.18	.86
1250	82.9	8.82	.41	83.3	8.32	.17	83.9	8.75	.21	81.2	8.85	.15	73.8	7.80	.69	70.1	8.34	.86
2500	79.2	9.30	.30	80.6	8.51	.21	81.8	8.66	.21	78.5	9.09	.03	68.7	7.46	.76	65.3	9.33	.86
5000	72.4	8.98	.24	75.1	5.76	.33	76.7	8.28	.26	72.7	8.99	.18	59.7	8.46	1.10	55.6	9.27	.78
OASPL	101.1	8.16	.10	100.8	5.90	.15	100.6	6.30	.14	99.3	7.93	.17	96.9	7.34	.26	96.3	7.86	.62

RUNS 299- 306, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.8	7.15	.26	94.4	6.89	.14	97.2	6.72	.16	97.7	6.10	.13	99.0	6.43	.22
630	84.9	6.77	.27	91.2	7.32	.41	93.7	8.16	.28	93.6	7.26	.27	92.8	6.57	.15
1250	80.3	8.44	.11	85.8	9.02	.25	87.4	9.43	.30	88.6	8.81	.35	88.8	8.38	.21
2500	73.2	8.72	.17	79.5	9.35	.13	82.9	9.77	.25	83.8	9.11	.61	84.7	9.06	.08
5000	63.0	7.78	.06	71.0	8.48	.22	73.6	8.90	.47	75.4	8.23	.39	78.1	8.39	.09
OASPL	100.5	5.35	.18	104.8	5.51	.20	106.9	6.10	.14	107.1	5.43	.25	107.0	5.89	.20

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.4	5.35	.14	95.0	5.30	.40	91.8	5.44	.36							.0	.00	.00
630	90.9	7.19	.27	90.1	7.26	.27	88.2	6.69	.19							.0	.00	.00
1250	87.4	9.02	.30	87.2	8.45	.38	86.5	8.07	.24							.0	.00	.00
2500	83.9	9.36	.27	84.1	8.48	.39	84.3	8.49	.33							.0	.00	.00
5000	74.9	8.82	.42	78.2	7.96	.41	79.6	7.02	.25							.0	.00	.00
OASPL	106.3	5.90	.12	105.3	5.57	.36	104.7	5.94	.28							.0	.00	.00

RUNS 299- 306, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.8	7.52	.07	89.0	7.15	.49	90.5	7.38	.19	90.4	6.26	.16	93.0	6.80	.21
630	80.6	7.16	.35	87.2	7.61	.19	86.7	7.91	.17	88.2	7.28	.27	89.5	8.13	.23
1250	74.8	8.01	.38	82.0	8.72	.34	83.6	9.20	.43	85.1	8.59	.08	86.3	9.47	.14
2500	68.3	8.36	.08	76.4	9.42	.43	79.2	9.64	.26	80.3	8.99	.35	81.9	9.94	.19
5000	57.9	7.41	.18	67.2	7.95	.32	69.4	8.40	.47	72.7	6.82	.21	76.1	9.96	.17
OASPL	94.2	5.33	.07	100.5	5.57	.03	101.6	5.96	.13	102.5	5.47	.21	103.4	6.81	.14

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.0	5.58	.09	91.1	6.29	.19	89.5	6.66	.15	.0	.00	.00	86.8	7.10	.76	.0	.00	.00
630	87.7	7.63	.10	87.0	7.27	.23	87.1	7.62	.31	.0	.00	.00	82.8	7.40	.61	.0	.00	.00
1250	83.0	8.99	.11	84.3	8.08	.26	84.7	8.65	.11	.0	.00	.00	76.7	7.13	.81	.0	.00	.00
2500	83.7	9.39	.30	81.8	8.77	.15	82.7	9.06	.08	.0	.00	.00	73.0	8.06	.83	.0	.00	.00
5000	74.6	8.39	.30	75.9	8.50	.18	77.7	8.67	.33	.0	.00	.00	62.6	6.93	.69	.0	.00	.00
OASPL	101.8	6.35	.27	101.9	6.52	.12	101.6	7.00	.08	.0	.00	.00	99.2	6.29	.41	.0	.00	.00

TABLE A-II.- CONTINUED.

RUNS 331- 338, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	74.7	7.73	.36	79.1	7.84	.22	82.4	7.74	.26	85.4	8.64	.39	84.9	8.04	.01			
630	72.8	7.66	.34	78.1	8.31	.14	81.1	8.30	.27	83.5	8.64	.39	83.4	8.23	.19			
1250	69.1	8.05	.48	74.8	8.80	.15	78.2	8.73	.22	81.7	9.16	.34	81.8	8.48	.17			
2500	63.7	8.18	.51	71.2	8.54	.21	76.3	9.15	.29	78.3	9.50	.39	78.3	8.28	.11			
5000	55.6	8.33	.45	66.1	8.84	.10	69.4	8.81	.35	72.3	9.48	.54	73.6	8.66	.20			
OASPL	86.5	6.91	.12	91.4	7.18	.13	95.1	7.49	.16	97.3	7.97	.16	97.2	7.42	.17			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	85.2	7.53	.06	87.3	8.81	.04	87.1	8.79	.22	86.0	8.06	.32	87.4	9.82	.26	81.3	8.14	.25
630	84.0	8.02	.30	85.5	8.70	.14	86.1	9.28	.28	84.7	8.30	.27	84.5	9.18	.15	77.8	8.00	.18
1250	81.9	8.43	.16	84.3	9.37	.18	83.6	9.00	.33	82.3	8.92	.22	81.4	9.59	.18	73.6	8.03	.37
2500	79.8	8.61	.09	81.4	9.36	.26	82.3	9.28	.28	80.3	9.07	.17	78.4	9.89	.20	69.2	8.07	.44
5000	74.7	8.47	.07	77.0	9.89	.25	78.3	9.66	.38	75.2	8.78	.16	71.5	9.09	.28	61.8	8.50	.39
OASPL	97.9	7.33	.09	98.9	8.04	.09	99.2	8.21	.12	98.1	7.67	.16	98.9	8.94	.17	94.0	8.03	.31

RUNS 331- 338, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	71.4	7.89	.07	78.3	7.73	.25	78.8	7.94	.17	41.3	4.16	37.*	82.2	7.38	.21			
630	67.8	6.85	.59	74.5	7.64	.25	77.9	8.27	.12	40.1	4.11	36.*	80.9	8.08	.10			
1250	63.0	6.79	.22	71.5	8.45	.21	74.3	8.26	.21	39.1	4.06	35.*	78.9	8.36	.08			
2500	58.4	7.78	.31	67.6	8.49	.27	72.1	8.36	.08	37.4	4.08	33.*	75.2	8.48	.21			
5000	50.8	7.72	.06	62.0	8.58	.28	65.7	8.66	.03	34.0	3.68	30.*	71.4	8.93	.10			
OASPL	82.9	7.12	.17	87.5	7.01	.14	90.7	7.38	.05	47.5	4.71	43.*	93.8	7.40	.08			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	82.9	7.98	.19	84.9	8.30	.21	84.5	8.33	.28	84.4	8.32	.21	85.6	9.78	.19	80.1	8.61	.27
630	81.7	7.83	.29	83.3	8.47	.25	83.3	8.80	.28	83.6	8.69	.15	82.5	9.01	.48	77.8	8.98	.18
1250	79.6	8.31	.14	81.6	9.35	.26	81.8	9.49	.30	81.0	8.97	.16	79.8	9.53	.37	73.2	8.97	.40
2500	77.5	9.02	.12	79.1	9.85	.18	80.2	9.56	.23	78.6	9.46	.05	76.8	9.88	.29	67.3	8.32	.29
5000	73.2	9.02	.12	74.5	9.62	.31	76.1	9.74	.53	73.5	9.40	.11	70.0	10.*	.31	58.7	8.10	.09
OASPL	94.7	7.59	.06	96.0	8.26	.24	96.2	8.23	.18	95.8	7.95	.07	96.6	8.96	.27	82.7	8.48	.34

RUNS 339- 354, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	90.8	6.87	.65	96.1	5.50	.64	97.0	4.16	.43	98.5	5.05	.28	101.1	6.69	.34			
630	85.3	6.77	.10	92.0	6.84	.18	93.4	7.35	.20	93.3	6.26	.24	94.5	7.86	.16			
1250	80.7	8.22	.14	86.8	8.64	.30	88.0	8.61	.09	90.3	8.34	.29	92.2	9.35	.19			
2500	75.1	9.19	.36	82.7	9.66	.37	85.0	9.96	.26	85.8	9.02	.23	86.8	9.83	.31			
5000	67.0	8.33	.45	76.4	8.98	.60	77.1	9.19	.45	78.9	8.49	.33	82.0	9.80	.56			
OASPL	100.6	5.52	.08	105.0	5.79	.13	107.1	5.90	.08	106.0	5.56	.19	109.2	6.41	.10			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	100.1	7.67	.43	99.4	6.82	.22	97.5	7.34	.21	93.4	7.01	.32				82.8	8.82	.93
630	94.2	8.07	.20	93.3	7.10	.30	92.1	7.15	.29	88.8	6.98	.29				80.4	8.92	.95
1250	90.7	8.87	.28	89.6	7.90	.27	88.8	7.76	.25	85.0	8.10	.35				76.2	7.88	.73
2500	87.0	9.28	.36	86.0	8.66	.32	86.0	8.50	.55	81.3	8.79	.27				69.3	8.98	.91
5000	81.6	9.52	.43	81.1	8.93	.38	81.9	8.95	.58	76.8	8.68	.45				60.4	8.88	.84
OASPL	109.1	6.57	.22	108.0	5.86	.24	107.3	6.06	.23	106.4	7.46	.55				98.8	7.04	.82

TABLE A-II.- CONTINUED.

RUNS 339- 354, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	84.6	6.77	.26	88.7	6.01	.56	89.9	5.11	.52	92.5	5.59	.22	95.0	7.32	.61
630	78.9	7.10	.24	84.8	6.53	.14	86.1	6.89	.22	87.5	7.06	.30	87.5	7.18	.12
1250	72.8	8.27	.12	79.5	8.55	.11	80.1	8.88	.17	82.3	8.40	.45	83.8	9.27	.21
2500	64.9	8.97	.26	73.5	9.36	.14	76.0	9.73	.19	76.7	8.96	.34	78.1	9.78	.13
5000	52.0	8.03	.24	63.9	8.73	.22	66.1	9.01	.23	67.9	8.93	.38	71.1	9.88	.38
OASPL	93.0	5.30	.16	97.8	5.82	.14	98.3	5.82	.13	100.9	5.59	.16	101.7	6.24	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	95.0	7.72	.26	98.3	7.87	.33	92.9	7.25	.27	86.3	7.15	.10	79.1	6.05	.39			
630	87.1	6.75	1.31	88.8	7.18	.15	84.2	6.61	.06	81.9	7.20	.48	77.3	6.87	.07			
1250	83.0	9.31	.21	82.1	8.49	.33	80.6	7.64	.20	78.1	8.91	.41	72.6	8.06	.24			
2500	78.2	9.77	.28	77.5	8.97	.30	76.7	8.80	.30	73.3	9.47	.55	66.4	9.57	.37			
5000	70.3	9.34	.44	69.9	9.00	.73	69.6	8.07	.24	65.1	8.96	.65	53.7	8.87	.12			
OASPL	101.4	6.47	.09	100.8	6.12	.21	99.2	5.67	.10	98.0	7.21	.59	93.7	7.00	.14			

RUNS 339- 354, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	87.0	6.51	.35	92.1	8.33	.38	91.2	6.42	.16	93.8	6.16	.35	94.8	7.28	.28
630	82.3	7.00	.14	88.3	7.97	.07	89.1	7.16	.08	90.1	6.69	.08	91.1	7.89	.17
1250	78.0	8.19	.26	83.3	8.83	.23	84.5	8.55	.29	86.8	7.75	.16	87.8	9.06	.10
2500	70.4	9.27	.05	79.5	10.*	.08	81.5	9.76	.58	83.1	9.17	.13	83.7	10.*	.09
5000	61.3	8.55	.16	73.3	9.84	.18	73.7	8.77	.48	76.2	8.58	.11	79.3	10.*	.18
OASPL	97.1	5.41	.04	101.3	6.37	.16	101.5	5.85	.13	102.8	5.60	.14	103.6	7.03	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	95.0	7.51	.16	96.0	7.65	.62	94.0	6.76	.71	88.2	7.47	.27	86.3	4.38	.53	88.7	7.87	.46
630	90.0	7.56	.32	88.9	7.31	.44	88.1	7.09	.20	84.9	7.28	.28	83.1	6.99	.48	84.2	8.33	.52
1250	86.7	9.10	.01	86.3	8.80	.27	85.3	7.89	.11	82.2	9.15	.18	79.0	7.13	.57	79.6	9.04	.60
2500	83.4	9.43	.23	82.9	8.89	.14	82.7	8.31	.12	78.7	10.*	.09	73.8	7.78	.43	74.0	9.58	.69
5000	78.3	9.55	.32	77.6	9.15	.44	78.3	8.69	.02	74.0	10.*	.38	64.5	6.64	.41	64.9	9.44	.80
OASPL	103.3	6.73	.07	108.9	6.62	.34	102.8	6.41	.84	100.9	7.95	.14	99.8	6.26	.80	98.6	8.07	.60

RUNS 339- 354, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	86.8	8.46	.72	90.7	7.62	.87	88.5	6.57	.36	91.1	7.20	.26	90.6	6.90	.29
630	80.4	7.01	.39	85.9	7.57	.37	87.0	7.54	.02	88.2	8.02	.23	86.6	7.87	.49
1250	75.2	8.10	.41	81.1	8.38	.18	83.8	8.73	.11	85.1	9.36	.06	83.6	8.83	.40
2500	68.3	9.06	.10	76.4	10.*	.28	79.4	9.12	.28	82.2	10.*	.30	80.2	9.96	.46
5000	60.4	8.64	.27	69.5	9.43	.23	71.1	8.46	.26	76.1	10.*	.19	76.6	10.*	.89
OASPL	96.9	6.22	.17	100.1	6.46	.45	99.1	5.85	.17	100.8	6.72	.17	99.8	6.63	.39

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.9	6.30	.37	91.3	7.84	.67	90.4	7.21	.61	92.2	6.99	.18	93.9	6.27	.16	92.1	8.15	.61
630	85.4	6.83	.11	86.2	7.52	.31	87.1	7.07	.07	88.4	7.85	.31	89.3	6.55	.13	87.3	8.33	.48
1250	81.9	8.34	.21	82.9	8.64	.27	83.4	8.51	.21	83.7	8.34	.07	84.4	7.21	.18	82.7	8.87	.22
2500	80.0	9.50	.29	79.9	9.72	.05	79.0	8.43	.47	79.2	9.01	.09	79.6	7.61	.32	77.5	9.21	.27
5000	75.8	9.72	.49	75.0	9.78	.45	74.5	8.72	1.02	73.0	8.62	.26	72.2	7.54	.18	70.1	9.41	.39
OASPL	99.2	6.27	.08	100.1	7.16	.23	100.2	7.21	.21	101.7	7.15	.05	103.3	6.58	.08	101.5	8.00	.32

RUNS 355- 362, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.7	7.41	.62	89.0	8.42	.46	89.6	7.73	.13	92.6	8.54	.33	94.3	8.97	.07
630	81.0	8.00	.86	86.1	8.14	.43	87.2	7.44	.57	90.7	8.43	.64	91.7	8.65	.33
1250	77.7	8.07	.67	83.3	8.94	.36	84.7	8.52	.48	88.5	8.90	.63	90.0	9.19	.74
2500	74.4	8.71	1.03	80.8	9.16	.70	82.8	8.66	.41	85.6	9.24	.68	86.4	9.34	.80
5000	68.1	8.83	1.42	76.7	9.86	1.12	76.7	8.48	.71	80.1	9.29	.84	82.2	9.30	.69
OASPL	98.1	4.77	.44	101.5	5.41	.25	102.7	5.41	.22	104.9	6.45	.46	105.3	7.10	.16

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	94.4	8.91	.21	95.5	8.45	.36	97.9	9.81	.29	97.9	9.42	.25	87.6	7.69	.41			
630	92.7	9.10	.24	93.6	8.85	.50	94.3	9.25	.13	91.0	8.86	.22	82.3	7.13	.57			
1250	89.5	8.73	.17	90.5	8.94	.20	90.5	8.94	.20	85.6	8.97	.29	79.9	7.71	.68			
2500	87.0	8.94	.40	87.2	8.82	.36	87.5	9.03	.28	82.9	9.01	.42	75.7	7.54	.37			
5000	82.5	9.02	.46	82.5	8.53	.40	83.4	8.48	.34	77.9	8.74	.36	69.3	7.61	.68			
OASPL	105.3	7.17	.18	105.6	7.19	.27	107.3	8.36	.14	108.8	9.03	.14	105.6	7.12	.26			

TABLE A-II.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
RUNS 355- 362, MICROPHONES 30 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	80.3	8.21	.10	85.4	8.81	.33	86.6	7.95	.43	80.3	8.48	.03	90.6	8.70	.14			
630	77.0	8.08	.20	82.9	8.81	.33	83.8	8.26	.29	88.0	9.16	.18	88.4	9.04	.40			
1250	73.9	8.69	.21	79.3	8.84	.16	80.5	8.14	.07	85.4	9.28	.19	88.8	9.83	.20			
2500	69.2	9.00	.45	76.3	8.97	.36	78.8	8.86	.19	81.6	9.80	.24	81.8	9.85	.38			
5000	62.0	8.98	.20	71.9	9.16	.40	71.9	8.23	.13	75.8	9.06	.10	77.8	10.+	.30			
OASPL	95.9	5.56	.28	100.0	6.36	.28	100.3	5.59	.10	102.5	7.18	.17	102.3	7.85	.22			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.5	8.12	.32	91.5	8.07	.36	91.6	8.49	.27	84.9	7.91	1.03	80.2	7.82	.81	78.8	8.88	1.43
630	88.2	8.30	.33	86.7	7.75	.41	88.0	8.23	.82	79.7	7.96	.81	78.7	6.90	1.00	73.2	7.63	1.38
1250	84.5	8.21	.33	83.8	8.18	.46	81.9	7.69	.38	77.4	8.86	.30	71.7	7.05	1.06	68.7	8.03	1.43
2500	81.4	8.30	.33	81.4	8.41	.39	80.4	8.21	.31	75.2	8.98	.35	68.1	7.48	1.11	68.2	8.48	.98
5000	76.7	8.44	.40	77.0	8.91	.75	77.2	8.71	.63	70.9	9.23	.40	60.7	7.11	1.12	67.3	8.83	.80
OASPL	101.7	8.92	.21	101.9	7.43	.81	102.4	8.02	.38	102.4	8.77	.43	99.5	6.45	.82	96.1	6.86	.89
RUNS 363- 378, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	91.0	6.19	.27	95.5	5.83	.10	97.3	6.58	.66	96.5	5.90	.06	97.1	7.12	.41			
630	86.1	6.19	.16	91.7	6.40	.64	92.5	6.95	.24	92.6	6.71	.10	91.3	6.88	.03			
1250	82.3	7.58	.31	88.0	7.76	.54	89.0	7.89	.27	90.0	7.87	.23	89.3	8.23	.21			
2500	78.1	7.75	.26	85.0	8.25	.25	86.9	8.50	.35	86.2	7.80	.33	86.4	9.37	.13			
5000	71.6	8.21	.23	80.2	8.49	.26	80.9	8.92	.42	81.5	8.34	.24	82.8	9.56	.13			
OASPL	100.2	4.96	.06	104.7	5.82	.34	106.3	6.10	.34	107.2	6.21	.10	107.8	7.41	.20			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.9	6.07	.06	87.6	5.09	.28				92.4	5.15	.27	96.8	5.54	.31	94.0	7.35	.22
630	89.9	5.81	.32	85.4	5.72	.28				92.4	7.21	.36	95.0	7.03	.15	91.4	8.33	.28
1250	86.2	6.84	.36	83.0	7.00	.20				88.3	7.55	.30	91.1	7.43	.14	89.0	9.28	.33
2500	84.5	7.64	.45	80.7	8.08	.10				84.8	8.25	.41	88.0	7.04	.38	83.8	9.37	.18
5000	80.6	7.63	.57	76.5	7.98	.13				79.4	7.67	.50	78.5	7.38	.39	76.7	9.45	.24
OASPL	106.1	6.64	.29	102.7	6.40	.19				105.3	6.31	.27	107.9	6.49	.21	103.8	7.56	.25
RUNS 363- 378, MICROPHONES 60 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	83.3	5.01	.16	87.7	5.52	.37	89.5	6.05	.27	90.9	5.99	.21	91.4	6.89	.14			
630	78.3	5.86	.11	84.4	6.32	.37	84.8	6.73	.04	85.5	6.46	.21	85.4	6.97	.12			
1250	73.0	6.95	.14	79.7	7.55	.19	80.9	8.14	.21	82.1	7.27	.07	82.2	8.33	.29			
2500	66.5	7.46	.06	75.2	8.19	.59	77.1	8.30	.47	77.5	7.96	.15	77.9	9.10	.24			
5000	55.6	7.33	.21	67.3	8.45	.33	68.2	8.54	.41	69.8	8.31	.12	72.0	9.58	.12			
OASPL	92.7	4.66	.07	97.4	5.61	.28	98.5	6.00	.23	99.9	5.86	.17	101.1	7.46	.12			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	88.8	6.16	.34	85.7	5.12	.20	82.7	5.63	.57	87.7	5.64	.51	90.1	5.75	.41	87.1	8.16	.26
630	83.9	5.66	.45	81.9	5.35	.32	78.6	5.65	.33	84.2	5.86	.31	86.1	6.31	.51	83.4	8.63	.43
1250	80.4	7.23	.36	79.1	6.73	.37	74.9	6.32	.24	80.2	6.53	.51	82.1	6.81	.56	79.7	8.83	.41
2500	77.1	8.15	.52	76.0	7.34	.37	71.3	6.53	.52	76.3	6.61	.33	76.9	7.01	.46	73.3	8.63	.62
5000	70.8	8.58	.48	69.2	7.37	.40	64.5	7.27	.67	67.8	7.05	.48	67.6	7.64	.41	61.6	9.54	.49
OASPL	100.3	6.92	.34	98.0	6.11	.09	93.9	5.76	.29	97.5	5.68	.30	100.4	6.52	.33	96.7	7.89	.33
RUNS 363- 378, MICROPHONES 30 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	87.9	6.16	.39	92.8	7.30	.11	93.7	7.12	.38	94.0	5.83	.14	96.1	8.54	.84			
630	82.9	6.30	.11	89.0	6.65	.16	90.2	6.71	.47	90.6	5.87	.20	91.1	8.10	1.01			
1250	78.4	7.90	.06	84.7	7.82	.28	86.2	7.95	.43	87.3	6.95	.30	87.8	8.56	1.18			
2500	73.5	8.15	.32	81.6	8.82	.21	84.0	8.82	.28	83.8	7.38	.25	84.1	9.18	1.11			
5000	66.9	8.24	.45	77.4	9.31	.28	77.5	8.83	.53	78.4	7.99	.33	80.3	9.79	1.19			
OASPL	97.6	5.24	.11	102.4	6.31	.30	102.9	6.21	.37	103.7	5.63	.35	104.6	7.09	.92			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.2	7.03	.21	87.1	5.33	.63	86.3	6.34	.87	94.4	6.97	.53	95.9	6.83	.10	91.4	7.86	.06
630	87.4	6.54	.08	83.3	5.19	.73	81.4	5.41	.74	89.1	6.42	.30	91.0	6.36	.20	87.9	7.97	.38
1250	84.3	7.45	.14	81.6	6.49	.88	79.7	6.86	.63	85.4	7.09	.21	86.7	6.09	.13	88.4	8.84	.35
2500	82.1	8.23	.13	79.8	7.85	1.15	77.3	7.35	.78	83.2	7.93	.40	83.7	6.32	.14	81.3	8.35	.40
5000	77.8	9.00	.08	74.3	7.16	1.16	73.2	7.87	.96	77.0	7.99	.25	77.2	7.83	.30	74.4	9.26	.33
OASPL	102.5	7.06	.18	98.9	5.10	.55	98.5	5.72	.67	103.9	6.62	.22	108.0	6.33	.16	101.1	7.33	.85

TABLE A-II.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 363- 378, MICROPHONES 0 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	85.7	6.51	.18	91.5	7.09	.33	90.4	6.57	.25	93.3	8.18	.34	93.1	8.42	.32
630	80.6	6.27	.26	85.8	6.61	.27	88.0	6.25	.22	90.2	8.50	.75	88.5	8.40	.40
1250	77.0	7.22	.26	81.6	7.18	.17	84.3	6.99	.22	86.9	9.01	.57	85.8	9.18	.14
2500	71.0	8.21	.19	77.8	7.83	.32	82.2	7.81	.05	83.6	9.39	.56	82.7	10.+	.22
5000	65.2	8.04	.48	72.9	7.76	.62	76.0	7.99	.13	78.9	10.+	.44	79.0	10.+	.23
OASPL	97.6	5.60	.11	101.4	6.14	.20	101.2	5.60	.21	103.2	7.27	.43	102.6	7.80	.23

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.5	7.62	.59	88.7	6.03	1.04	91.8	6.77	2.63	92.4	5.26	1.08	97.2	7.42	.07	91.7	7.45	.30
630	84.7	6.83	.61	85.1	5.89	1.11	87.5	6.54	2.70	89.6	5.73	.50	91.6	6.81	.09	88.9	7.63	.43
1250	81.4	8.13	.76	82.8	7.30	1.08	84.3	6.49	2.00	85.7	6.20	.49	87.8	6.34	.29	86.2	8.83	.28
2500	79.3	9.42	1.22	80.1	8.21	.58	81.7	7.82	2.05	82.9	6.66	.35	84.3	6.18	.30	82.9	8.72	.41
5000	76.1	10.+	1.21	78.2	8.33	.52	77.1	7.98	1.91	78.0	7.43	.45	78.3	6.58	.18	76.8	9.48	.43
OASPL	100.2	6.87	.61	100.8	6.35	.32	101.8	6.63	1.82	103.1	5.56	.58	105.5	6.16	.08	101.8	7.11	.22

RUNS 379- 386, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	88.5	7.02	.45	93.0	8.11	.28	95.4	8.58	.08	98.4	8.62	.28	101.3	9.34	.24
630	85.3	7.40	.44	91.2	8.69	.38	94.4	9.04	.18	96.0	8.54	.15	97.2	9.27	.49
1250	82.3	7.91	.36	87.8	8.83	.32	89.2	8.33	.09	92.1	8.50	.20	92.6	8.88	.38
2500	77.9	7.98	.48	84.8	8.88	.57	86.9	8.70	.23	88.4	8.73	.16	88.1	8.60	.39
5000	71.8	8.04	.22	80.5	9.08	.50	80.6	8.55	.29	82.3	8.30	.20	84.1	9.23	.55
OASPL	99.7	4.05	.31	104.2	6.22	.07	106.0	7.33	.23	108.5	7.77	.39	110.2	8.00	.34

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	100.9	8.89	.14	97.7	6.98	.46	90.4	6.08	.38	84.3	7.64	.14	91.9	7.47	.20	95.3	9.74	.13
630	95.4	8.79	.06	89.2	7.17	.20	85.1	6.74	.35	80.4	7.59	.19	84.8	7.07	.31	88.6	8.98	.04
1250	89.5	8.39	.29	85.4	7.49	.40	82.8	6.98	.28	76.8	7.98	.31	79.6	7.11	.28	83.2	8.82	.18
2500	86.9	8.33	.46	83.4	7.64	.41	81.2	7.20	.22	74.1	7.81	.05	76.5	7.72	.34	79.3	9.31	.17
5000	82.5	8.43	.36	79.4	7.43	.58	78.4	7.62	.24	68.9	8.30	.11	69.6	7.30	.44	72.7	9.20	.30
OASPL	110.9	8.28	.19	109.5	7.19	.21	107.4	6.65	.17	101.2	5.75	.19	106.9	6.31	.39	105.6	8.18	.20

RUNS 379- 386, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.6	6.94	.04	90.0	8.29	.04	91.4	8.52	.12	94.9	8.39	.36	95.4	9.79	1.98
630	80.9	7.66	.18	88.0	8.70	.24	89.3	8.87	.16	93.1	8.89	.59	90.7	9.37	2.13
1250	77.9	7.69	.16	84.2	9.64	.27	86.2	9.14	.08	89.0	8.91	.29	86.6	8.93	1.81
2500	73.7	7.88	.18	81.7	8.93	.30	84.0	9.06	.10	84.8	8.86	.32	83.0	9.80	1.71
5000	67.1	8.12	.33	77.3	9.07	.35	77.7	8.91	.06	79.1	8.98	.30	79.2	10.+	1.58
OASPL	97.6	4.89	.23	102.8	6.29	.33	103.1	6.16	.11	105.2	7.23	.12	106.5	8.64	1.27

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	94.8	9.50	1.16	85.9	4.66	.41	81.6	5.21	.38	88.3	7.12	.55	93.4	7.50	.18	92.7	9.82	.26
630	89.4	9.48	1.15	79.7	4.69	.65	77.8	5.64	.31	82.9	6.38	.79	88.2	7.78	.12	87.8	9.43	.07
1250	85.0	9.84	1.37	77.9	5.42	.95	75.4	6.41	.38	78.5	6.58	.77	83.2	7.84	.11	82.6	8.88	.38
2500	83.2	9.90	1.23	76.0	5.81	1.06	73.3	6.44	.29	75.7	7.04	.81	78.2	7.87	.08	78.0	9.12	.31
5000	78.8	9.99	1.08	71.6	5.91	1.06	70.0	6.61	.24	70.2	7.83	.44	71.4	7.38	.30	78.6	9.08	.40
OASPL	106.7	9.17	1.04	102.0	6.21	.73	100.4	6.02	.52	103.7	6.61	.27	107.2	7.87	.81	104.4	8.89	.20

RUNS 452- 459, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	92.6	6.42	.30	99.3	7.10	.41	98.9	5.69	.18	98.8	6.25	.27	98.7	6.28	.37
630	88.5	6.93	.09	94.6	7.06	.35	94.6	6.78	.16	95.7	7.10	.04	95.3	7.11	.37
1250	83.3	7.63	.13	90.2	8.26	.26	91.1	7.69	.12	95.1	8.71	.10	93.4	8.16	.27
2500	78.4	7.18	.36	84.8	7.30	.48	85.5	6.32	.73	87.6	7.43	.31	87.3	7.48	.80
5000	73.0	8.90	.22	80.9	8.91	.11	80.5	8.24	.08	82.5	8.78	.39	83.9	8.81	.12
OASPL	102.6	5.82	.17	107.4	6.01	.16	108.5	5.64	.05	110.0	6.15	.11	109.3	6.12	.23

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	94.9	5.52	.21	92.3	5.54	.05	90.1	5.87	.12	96.2	6.20	.62	97.4	6.63	.85	95.1	7.49	.13
630	92.2	6.09	.17	91.4	6.39	.03	89.5	6.25	.43	94.6	6.65	.19	95.0	6.72	.66	93.0	7.91	.12
1250	89.1	7.18	.11	89.2	7.50	.11	85.7	7.19	.23	90.9	7.65	.65	91.7	7.58	.61	89.7	9.05	.22
2500	84.5	6.38	.36	84.3	6.53	.44	79.2	5.37	.63	84.9	6.43	.65	82.7	5.29	.26	80.2	5.85	1.19
5000	81.0	7.81	.17	81.3	8.08	.19	75.9	7.52	.25	79.1	7.97	.32	78.5	7.76	.68	75.4	8.50	.34
OASPL	107.8	5.84	.18	106.7	6.15	.01	103.8	5.68	.23	107.0	6.22	.26	107.4	6.22	.26	104.4	6.88	.52

TABLE A-II.- CONTINUED.

RUNS 4[illegible]- 459, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.7	6.26	.30	94.1	6.70	.19	94.4	6.18	.29	96.0	6.84	.24	97.5	6.97	.32
630	84.3	6.54	.32	91.2	6.62	.31	91.6	6.23	.10	93.6	6.94	.23	93.5	7.33	.54
1250	77.9	7.03	.50	86.0	8.02	.22	88.5	7.87	.17	90.1	7.61	.24	90.3	7.73	.36
2500	71.0	6.47	.74	81.0	7.80	.30	83.4	7.11	.81	85.3	7.52	.17	84.7	7.47	.38
5000	65.8	8.64	.56	76.0	8.59	.17	75.9	7.68	.25	78.5	8.37	.22	80.4	8.54	.59
OASPL	98.7	5.50	.32	103.1	5.85	.21	103.4	5.44	.13	105.7	6.15	.24	106.1	6.34	.36

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.7	6.49	.24	93.3	6.32	.29	88.5	5.47	.33	95.9	7.30	.54	96.7	6.97	.29	91.6	6.58	.23
630	91.4	6.56	.14	91.5	7.37	.17	86.9	6.18	.15	90.2	6.72	.74	91.9	6.17	.06	89.3	7.08	.26
1250	87.9	7.37	.17	87.9	8.06	.45	85.4	7.52	.39	85.5	6.85	.70	87.8	6.56	.33	85.6	7.55	.29
2500	83.1	6.79	.26	83.4	7.38	.35	80.0	6.20	.14	79.7	5.19	.98	83.8	6.31	.38	80.7	6.80	.56
5000	77.8	7.30	.16	78.6	8.17	.40	77.3	8.09	.36	74.2	7.28	.61	77.3	8.18	.11	74.7	8.99	.37
OASPL	105.1	6.04	.20	105.1	6.65	.22	103.1	6.33	.12	104.6	6.69	.53	105.1	6.37	.20	101.0	6.26	.28

RUNS 460- 467, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.0	7.30	.14	98.3	7.58	.50	99.5	6.17	.34	99.8	6.28	.49	101.8	6.88	.08
630	86.3	7.11	.09	93.7	7.51	.38	94.1	7.08	.15	95.4	7.17	.45	96.2	7.82	.26
1250	80.9	7.85	.14	87.3	8.29	.22	89.2	8.45	.41	92.5	8.93	.32	94.1	9.32	.21
2500	71.7	6.18	.74	79.7	6.46	.74	82.3	6.58	1.00	83.0	6.28	.32	84.8	6.62	.94
5000	67.9	8.80	.18	77.3	8.97	.44	76.8	8.07	.11	79.9	8.96	.59	83.4	9.85	.20
OASPL	101.6	5.87	.23	106.7	6.40	.17	107.9	5.72	.14	109.8	6.04	.41	110.9	6.74	.10

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.9	6.08	.22	98.7	5.97	.05	98.0	6.80	.34	92.6	6.47	.34				84.0	5.89	.22
630	94.5	7.17	.34	93.8	6.62	.15	93.9	6.92	.52	88.8	6.49	.25				81.9	6.25	.23
1250	92.0	8.36	.22	91.5	7.83	.20	91.2	7.83	.34	86.4	7.67	.23				78.5	7.71	.06
2500	84.2	6.01	.96	82.9	5.03	.59	85.2	6.34	.37	79.6	6.00	.76				66.7	4.82	1.31
5000	81.5	8.15	.21	82.0	8.03	.28	82.2	8.16	.83	75.6	7.67	.23				62.6	7.80	.18
OASPL	109.6	5.91	.11	108.6	5.49	.25	108.9	6.05	.55	105.9	6.26	.15				98.3	6.53	.13

RUNS 460- 467, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.9	6.60	.38	91.7	6.87	.31	93.2	6.99	.08	94.3	7.28	.14	94.9	7.04	.21
630	82.5	6.58	.56	89.4	7.19	.24	89.4	6.94	.25	91.9	7.31	.21	91.3	7.10	.03
1250	75.6	7.24	.47	83.8	8.25	.33	85.6	7.85	.11	88.0	8.02	.22	88.7	8.20	.09
2500	66.4	5.91	.90	75.4	6.61	.62	78.4	6.34	.60	82.9	7.91	.47	82.5	7.64	.62
5000	62.0	8.63	.50	72.8	8.94	.41	73.8	8.05	.18	76.8	8.88	.27	78.9	8.86	.46
OASPL	98.2	6.06	.27	102.0	6.08	.21	102.3	5.72	.15	104.4	6.32	.20	104.4	6.40	.20

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.2	6.94	.30	96.2	7.77	.44	91.9	6.87	.31	86.8	5.62	.13	90.8	7.18	.58	88.7	7.05	.26
630	89.8	6.81	.43	89.9	7.34	.41	89.4	7.08	.28	83.4	6.17	.15	86.8	7.15	.39	83.4	6.41	.23
1250	87.4	7.98	.18	87.9	8.42	.35	86.9	8.05	.31	81.3	7.38	.09	82.7	8.06	.46	79.5	7.03	.48
2500	81.6	6.94	.57	82.5	7.45	.80	80.4	6.54	.67	73.4	5.24	.97	73.7	5.73	.96	71.3	5.01	.77
5000	78.4	8.32	.16	79.3	9.01	.57	77.8	8.34	.14	69.5	7.36	.28	69.0	8.33	.36	64.8	7.43	.35
OASPL	103.4	6.15	.14	104.1	6.78	.30	102.7	6.43	.25	100.2	6.43	.02	102.9	7.53	.36	98.5	6.78	.35

RUNS 468- 483, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	93.2	7.42	.32	97.9	6.92	.66	100.0	6.10	.78	99.2	5.69	.65	101.9	6.69	.25
630	87.2	6.92	.36	94.0	7.17	.42	95.3	7.19	.42	95.1	6.72	.22	96.8	7.73	.25
1250	81.3	8.00	.17	86.9	7.89	.17	89.9	8.54	.35	92.3	8.60	.18	94.2	9.10	.11
2500	71.6	6.02	.54	79.0	6.07	.70	81.9	6.40	.61	82.4	5.95	.36	85.0	6.60	.75
5000	67.4	8.68	.43	75.9	8.26	.45	76.9	8.18	.28	78.6	8.44	.69	83.4	9.40	.22
OASPL	102.7	5.92	.24	106.6	5.96	.38	108.9	5.86	.12	110.0	5.98	.22	111.2	6.54	.24

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	99.9	6.01	.21	101.1	6.74	.05	97.7	6.34	.12	92.6	5.80	.19				82.4	5.37	.73
630	95.4	7.16	.15	95.6	7.20	.09	94.8	6.96	.18	89.2	6.35	.28				82.6	6.82	.43
1250	92.2	8.32	.28	92.3	8.11	.20	91.9	8.12	.39	86.9	7.49	.34				77.8	7.43	.41
2500	84.7	5.99	.78	84.2	5.61	.65	84.3	5.68	.32	80.4	5.87	.63				65.2	3.93	1.65
5000	81.7	8.09	.13	82.7	8.48	.43	82.2	8.03	.52	76.0	7.59	.32				60.2	7.03	.48
OASPL	110.5	5.96	.25	110.2	6.11	.35	109.2	5.88	.44	106.7	6.27	.11				99.2	6.80	.61

TABLE A-II.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
RUNS 468- 483, MICROPHONES 60 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	85.0	7.28	.14	90.2	7.21	.24	92.3	7.02	.31	93.7	7.10	.36	94.1	6.88	.06			
630	78.7	6.62	.31	86.9	7.57	.30	86.3	6.65	.25	89.6	7.70	.21	89.6	7.66	.23			
1250	72.7	7.81	.38	79.5	8.08	.21	81.1	8.23	.10	85.1	8.81	.11	86.4	9.24	.33			
2500	61.6	6.23	.54	69.9	6.15	.97	72.1	5.84	.89	76.0	6.80	.58	76.3	7.01	.90			
5000	52.1	8.81	.12	64.2	8.69	.37	65.0	8.15	.35	69.6	9.26	.27	72.1	9.29	.21			
OASPL	94.1	5.85	.15	98.9	6.25	.22	100.2	5.93	.14	103.0	6.49	.27	102.9	6.48	.17			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.1	6.26	.24	93.9	7.16	.35	90.8	7.15	.39	83.5	5.76	.69	76.7	5.41	.64	77.1	6.02	.90
630	87.9	7.29	.29	87.9	7.52	.10	86.8	7.39	.37	81.0	6.29	.79	73.7	5.11	1.15	77.1	7.82	.52
1250	84.7	8.55	.10	83.9	8.33	.32	84.3	8.81	.49	78.0	7.37	.63	69.9	6.84	1.32	70.8	8.05	.63
2500	76.4	6.64	.69	76.6	6.84	.35	76.6	6.94	.34	69.3	5.61	1.28	57.1	3.26	.38	56.3	4.49	1.04
5000	70.9	8.34	.11	70.7	8.37	.38	71.7	8.68	.59	61.5	6.94	.86	50.5	6.77	1.43	46.4	7.55	1.09
OASPL	101.4	5.87	.06	101.6	6.21	.37	101.2	6.55	.27	97.4	6.31	.46	93.7	6.23	.55	93.0	6.88	.58
RUNS 468- 483, MICROPHONES 30 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	88.4	6.07	.38	92.2	7.25	.22	92.1	6.71	.06	93.1	6.82	.42	93.8	7.00	.07			
630	82.6	6.87	.31	89.1	7.39	.37	89.3	6.98	.24	91.5	7.51	.38	90.5	7.39	.12			
1250	76.1	7.56	.58	82.4	7.58	.33	85.4	7.66	.14	88.1	8.40	.47	88.8	8.04	.09			
2500	66.2	5.71	.76	74.3	5.93	.65	79.1	6.74	.43	82.4	7.81	.45	81.3	7.46	.38			
5000	61.1	8.30	.47	71.3	8.50	.42	73.2	8.23	.23	77.2	9.32	.43	77.9	8.78	.19			
OASPL	97.9	6.05	.27	101.4	6.11	.22	101.6	5.85	.06	103.8	6.43	.28	103.0	6.29	.06			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.8	6.70	.45	98.1	7.43	.29	91.5	6.59	.32	87.8	6.16	.72	92.8	7.54	.51	89.0	7.11	.06
630	89.8	7.16	.43	89.7	7.47	.55	89.1	7.07	.06	83.9	6.32	.05	87.5	7.27	.34	83.5	6.82	.17
1250	86.5	8.58	.38	88.6	8.68	.20	87.8	8.45	.13	80.6	7.42	.72	83.3	8.21	.17	80.3	7.54	.10
2500	82.0	7.17	.46	82.8	7.82	.40	79.8	6.14	.78	72.5	5.20	.18	75.0	5.60	.38	69.8	4.84	1.01
5000	78.3	8.30	.24	79.2	9.06	.39	77.7	8.37	.10	68.4	7.40	.90	70.3	8.01	.14	63.8	7.54	.10
OASPL	102.9	6.23	.18	104.1	6.92	.19	102.8	6.57	.14	100.4	6.53	.16	104.1	7.05	.24	99.8	6.87	.27
RUNS 468- 483, MICROPHONES 0 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	86.0	7.03	.45	90.4	6.96	.27	88.8	6.72	.13	88.7	6.21	.58	89.1	6.30	.60			
630	80.3	6.50	.35	84.9	6.87	.25	87.2	7.34	.28	86.7	7.14	.63	84.9	6.36	.41			
1250	75.5	7.69	.67	79.2	7.50	.24	82.7	8.03	.15	82.9	7.97	.80	82.8	7.70	.49			
2500	63.3	4.41	1.05	71.2	5.63	.82	75.3	6.10	.90	76.6	6.78	1.36	75.6	6.00	1.14			
5000	59.8	7.89	.37	66.8	7.69	.06	70.2	8.46	.41	71.9	8.57	.59	73.5	8.14	.39			
OASPL	97.1	6.19	.22	98.7	5.87	.07	99.3	6.00	.13	99.8	5.93	.52	98.5	5.43	.38			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.3	6.47	.11	94.1	7.39	.13	94.1	7.50	.30	94.9	7.47	.28	96.7	7.90	.25	92.1	7.60	.35
630	85.8	6.40	.20	88.7	7.19	.24	90.5	7.31	.40	90.1	6.89	.32	92.4	7.70	.29	87.1	7.01	.32
1250	84.6	8.01	.18	85.8	8.29	.35	87.6	8.59	.42	86.3	7.56	.30	80.1	8.65	.20	83.8	8.15	.26
2500	77.2	5.92	.51	77.1	5.39	.68	79.4	5.96	1.15	79.6	5.60	.65	79.7	5.76	1.01	71.3	3.61	1.63
5000	75.8	8.54	.54	76.0	8.66	.32	77.8	8.79	.56	74.7	7.95	.26	75.7	8.81	.31	68.6	8.19	.20
OASPL	100.1	6.04	.06	102.5	6.75	.30	103.7	6.96	.33	103.3	6.65	.18	105.1	7.12	.27	100.3	6.53	.49
RUNS 484- 491, MICROPHONES 90 DEGREES BELOW WINGTIP-																		
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	91.7	7.40	.38	97.8	7.59	.38	99.4	6.60	.75	99.8	6.48	.59	100.9	6.88	.24			
630	85.7	6.97	.32	94.1	7.61	.24	95.5	7.66	.06	97.3	7.83	.48	97.7	8.24	.17			
1250	80.8	8.05	.45	87.6	8.28	.34	89.6	8.64	.07	93.0	8.99	.38	93.9	9.38	.03			
2500	70.0	5.41	1.62	78.7	5.82	1.14	81.3	6.22	.98	83.0	6.01	1.10	84.9	6.88	1.12			
5000	65.7	6.97	.11	77.0	7.13	.36	77.1	7.25	.59	79.7	8.06	.72	82.9	8.45	.34			
OASPL	102.1	6.10	.12	107.0	6.38	.03	108.9	6.21	.11	111.0	6.54	.26	110.9	6.69	.16			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	99.7	6.55	.18	99.9	6.76	.25	98.2	6.90	.32	93.1	6.27	.52						
630	95.3	7.37	.18	95.7	7.50	.26	94.0	6.87	.34	89.4	6.75	.46						
1250	92.2	8.60	.08	93.1	8.57	.24	90.7	7.77	.47	86.6	7.65	.30						
2500	84.3	5.81	1.27	83.5	5.09	1.19	83.3	5.06	.78	79.5	5.47	1.00						
5000	81.2	7.33	.32	83.0	7.99	.46	81.5	7.23	.75	74.8	6.43	.16						
OASPL	109.8	5.98	.05	109.6	6.05	.46	108.6	5.93	.88	106.9	6.45	.27						

TABLE A-II.- CONTINUED.

RUNS 484- 491, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.0	6.78	.34	90.7	6.86	.37	92.2	7.01	.26	93.0	7.21	.24	93.7	7.11	.33
630	82.1	6.90	.40	87.2	6.71	.37	89.2	7.30	.15	90.3	7.23	.16	90.3	7.34	.53
1250	74.8	7.13	.40	81.5	7.38	.47	84.6	7.70	.20	86.7	8.01	.23	87.8	8.22	.33
2500	65.3	5.09	1.35	72.3	4.86	1.57	77.9	5.97	.70	80.2	6.83	.51	80.8	7.80	1.13
5000	58.8	5.88	.29	69.1	6.55	.40	71.1	5.98	.18	75.7	8.02	.36	77.1	7.91	.24
OASPL	97.6	6.17	.20	100.3	5.82	.35	101.3	5.78	.10	103.3	6.34	.23	102.8	6.22	.29

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	93.4	7.26	.32	93.6	7.05	.19	91.9	6.82	.12	86.4	5.97	.33	89.0	6.61	.72	86.4	6.44	.31
630	89.7	7.35	.34	89.1	7.81	.22	88.5	6.78	.16	82.7	6.12	.18	84.9	6.82	.67	83.2	6.91	.07
1250	88.2	8.60	.33	86.8	8.20	.34	87.3	8.28	.09	78.3	6.67	.30	80.6	7.49	.59	79.0	7.45	.20
2500	81.5	6.76	.88	80.9	6.59	.87	79.8	5.97	.89	69.6	3.76	.96	71.7	4.30	1.05	69.1	4.45	1.13
5000	77.5	7.62	.09	76.6	7.38	.13	75.8	6.71	.08	66.0	5.20	.39	66.8	6.07	.64	63.2	6.42	.23
OASPL	102.5	6.20	.17	102.7	6.44	.12	102.6	6.45	.07	99.7	6.31	.09	102.6	7.27	.53	99.9	7.24	.11

RUNS 492- 507, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	91.7	7.53	.42	96.9	7.49	.61	98.7	6.44	.64	99.8	6.43	.37	101.2	7.16	.16
630	86.0	7.20	.45	93.2	7.59	.31	95.3	7.84	.09	97.2	8.10	.34	97.3	8.83	.41
1250	80.1	7.85	.48	87.7	8.64	.36	88.5	8.26	.26	92.8	9.20	.34	94.0	9.67	.29
2500	69.0	4.95	1.65	77.4	5.57	1.06	80.7	6.06	.78	82.2	5.62	1.02	83.6	6.24	1.17
5000	64.7	6.92	.14	75.9	7.28	.45	75.8	6.94	.17	80.4	8.51	.51	81.9	8.71	.16
OASPL	101.9	6.19	.32	106.6	6.52	.23	108.6	6.06	.11	111.0	6.68	.23	111.0	6.86	.26

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	99.5	6.77	.51	100.2	7.04	.26	97.9	6.97	.09	93.6	6.48	.17	87.1	6.55	.26	.0	.00	.00
630	95.5	7.73	.12	96.2	7.80	.41	94.5	7.44	.13	89.1	6.54	.17	85.1	6.65	.05	.0	.00	.00
1250	91.8	8.64	.19	92.8	8.81	.48	91.6	8.56	.38	87.4	8.03	.37	81.6	7.84	.35	.0	.00	.00
2500	82.9	5.46	1.12	82.6	4.70	.79	82.1	4.85	.85	78.7	4.98	.96	71.1	3.95	1.29	.0	.00	.00
5000	80.3	7.24	.18	81.1	7.47	.68	82.0	7.90	.64	75.9	6.60	.33	68.4	6.05	.60	.0	.00	.00
OASPL	109.9	6.17	.17	110.2	6.33	.68	109.3	6.39	.31	107.4	6.76	.07	103.4	6.96	.09	.0	.00	.00

RUNS 492- 507, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.4	7.18	.33	90.8	7.33	.21	91.7	6.99	.08	94.0	7.23	.31	94.1	7.27	.52
630	81.6	6.94	.26	88.9	8.05	.13	89.6	7.64	.16	91.1	7.68	.35	91.2	7.97	.69
1250	74.0	7.09	.58	82.1	7.95	.50	84.5	7.76	.28	88.2	8.59	.17	89.2	8.97	.29
2500	65.5	5.63	.94	72.6	5.25	1.22	77.9	5.96	.82	82.2	7.67	.68	80.9	7.14	1.14
5000	59.6	6.84	.27	70.6	7.38	.29	72.5	6.87	.50	76.5	8.50	.08	77.2	8.34	.16
OASPL	97.3	6.39	.18	100.5	6.29	.28	101.8	6.11	.03	104.3	6.79	.26	103.7	6.75	.22

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	93.7	7.32	.03	95.9	7.62	.17	94.0	7.56	.24	86.8	6.16	.47	88.2	6.64	.50	88.5	7.16	.17
630	90.6	7.49	.13	90.8	7.88	.38	89.5	7.57	.39	82.3	6.08	.47	84.1	6.70	.45	83.4	6.98	.24
1250	88.7	8.87	.26	89.6	9.13	.30	88.2	8.78	.30	79.2	7.24	.72	80.2	7.74	.12	79.0	7.36	.06
2500	80.7	6.25	.72	82.8	7.10	1.09	81.0	6.65	1.00	70.7	4.04	1.73	71.2	4.04	.73	69.5	4.36	.80
5000	77.2	7.64	.46	78.7	8.26	.28	77.0	7.60	.08	68.8	6.21	.29	67.8	6.76	.24	64.5	6.96	.31
OASPL	103.3	6.48	.07	104.6	7.01	.23	103.8	7.15	.26	100.5	6.58	.19	101.6	7.27	.38	101.3	7.64	.06

RUNS 508- 515, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	90.7	7.03	.42	95.4	6.91	.41	97.5	5.86	.86	98.5	5.98	.64	99.4	6.43	.10
630	86.6	7.11	.10	93.8	7.47	.23	95.7	7.45	.23	96.7	7.55	.36	97.6	8.30	.10
1250	80.8	7.84	.09	88.1	8.57	.25	89.6	8.40	.16	92.3	8.95	.47	93.2	9.19	.20
2500	74.0	7.97	.18	81.8	8.08	.52	83.5	7.75	.25	85.8	8.43	.25	87.3	8.68	.13
5000	64.4	6.04	.27	75.4	6.39	.32	75.0	5.82	.19	78.3	7.04	.58	81.2	7.54	.22
OASPL	101.8	6.05	.13	106.3	6.26	.19	108.9	6.05	.06	110.1	6.30	.44	110.3	6.54	.24

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	97.5	5.98	.22	99.4	6.52	.36	97.4	6.65	.66	93.8	6.49	.48	88.5	6.46	.34	.0	.00	.00
630	95.7	7.50	.14	96.8	7.72	.31	93.7	7.04	.58	90.0	6.67	.16	87.0	7.03	.69	.0	.00	.00
1250	91.1	8.37	.10	92.6	8.45	.50	90.9	8.07	.58	86.5	7.56	.10	83.0	7.84	.34	.0	.00	.00
2500	86.6	7.95	.09	87.9	8.08	.30	86.7	8.02	.40	82.1	7.09	.14	77.4	7.31	.59	.0	.00	.00
5000	80.0	6.54	.13	80.8	6.57	.54	80.0	6.64	.54	75.6	6.07	.15	70.2	6.04	.27	.0	.00	.00
OASPL	109.0	5.80	.05	109.5	5.96	.59	108.4	6.07	.69	107.2	6.51	.16	104.8	7.16	.38	.0	.00	.00

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 508- 515, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	87.7	7.21	.57	91.4	7.63	.54	91.1	6.71	.37	94.1	7.07	.34	94.5	7.38	.47
630	83.1	7.34	.29	89.2	7.94	.19	89.4	7.43	.21	91.3	7.76	.21	90.6	7.09	.67
1250	75.0	7.47	.38	82.0	7.83	.68	84.8	7.80	.18	88.3	8.61	.27	88.7	8.00	.41
2500	68.5	7.47	.60	75.7	7.36	.72	80.2	7.37	.18	83.8	8.56	.36	82.9	8.53	.41
5000	59.5	6.43	.10	69.2	6.20	.59	71.7	6.00	.05	76.1	7.86	.41	76.4	7.04	.73
OASPL	97.4	6.37	.29	100.7	6.27	.34	101.8	5.88	.09	104.0	6.60	.24	103.3	6.81	.34

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
315	93.5	7.09	.26	95.8	7.55	.24	93.9	7.26	.39	85.9	5.60	.44	88.4	6.71	.44	88.3	7.81	.90
630	90.3	7.28	.11	90.8	7.68	.35	89.0	7.10	.52	82.9	6.13	.52	84.5	6.92	.39	84.1	7.82	.79
1250	88.5	8.67	.09	89.4	8.93	.38	88.3	8.69	.39	79.0	6.91	.77	79.9	7.84	.17	79.3	8.29	.81
2500	83.5	8.17	.07	84.9	8.64	.36	83.3	8.37	.62	73.4	6.21	.88	75.8	7.83	.17	73.5	8.20	.72
5000	76.6	7.03	.12	78.2	7.78	.20	76.9	7.29	.25	66.8	4.91	.37	66.5	5.93	.43	64.4	7.31	.91
OASPL	102.9	6.22	.14	104.2	6.72	.28	103.2	6.71	.33	100.2	6.30	.31	102.4	7.37	.26	100.7	7.63	.56

RUNS 516- 523, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	90.9	6.67	.30	95.8	6.72	.44	97.7	5.76	.61	98.7	5.63	.78	99.4	6.01	.21
630	87.6	7.18	.09	95.7	7.79	.12	96.6	7.50	.14	97.3	7.57	.22	97.9	8.03	.27
1250	82.3	7.95	.11	87.9	8.02	.42	88.7	7.55	.11	92.5	8.70	.42	93.1	8.81	.12
2500	75.2	8.28	.04	82.1	8.17	.40	84.6	8.08	.21	85.8	8.14	.17	88.5	9.11	.55
5000	64.5	5.70	.25	76.0	6.40	.14	76.1	6.05	.26	78.6	6.87	.34	81.7	7.51	.22
OASPL	101.8	5.69	.19	106.6	6.17	.29	109.2	5.97	.08	109.9	6.04	.39	110.7	6.53	.30

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
315	98.6	5.96	.40	99.6	6.22	.25	96.9	5.96	.81	93.2	6.09	.24	88.4	6.06	.34	.0	.00	.00
630	96.5	7.52	.17	96.6	7.38	.43	94.3	6.97	.27	90.0	6.54	.29	88.5	7.30	.46	.0	.00	.00
1250	91.7	8.24	.40	92.5	8.30	.38	91.4	8.04	.65	86.8	7.42	.20	84.7	8.14	.20	.0	.00	.00
2500	87.0	7.96	.26	87.8	8.02	.40	86.7	7.85	.28	82.4	7.22	.27	79.1	8.09	.37	.0	.00	.00
5000	80.1	6.20	.11	81.6	6.81	.47	80.7	6.52	.36	75.7	5.93	.05	70.6	6.10	.16	.0	.00	.00
OASPL	109.8	5.92	.20	109.4	5.80	.45	108.5	5.90	.62	106.6	6.18	.19	105.4	7.25	.44	.0	.00	.00

RUNS 516- 523, MICROPHONES 30 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	86.7	6.46	.34	91.3	7.30	.59	91.4	6.39	.03	94.4	6.98	.29	94.4	7.06	.51
630	83.4	7.16	.16	90.5	7.97	.25	90.4	7.50	.11	91.8	7.76	.21	91.7	7.84	.56
1250	75.0	7.07	.34	83.0	7.60	.48	84.4	7.32	.34	87.9	8.23	.40	89.2	8.58	.66
2500	69.4	7.61	.42	77.7	7.65	.61	80.9	7.43	.28	84.4	8.74	.38	83.7	8.84	.72
5000	58.8	5.75	.41	69.8	6.11	.40	71.5	5.62	.13	77.0	7.99	.33	77.4	7.75	.80
OASPL	97.3	6.03	.20	101.0	6.08	.29	101.8	5.72	.12	103.9	6.33	.29	103.3	6.29	.37

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
315	93.6	6.82	.18	96.1	7.48	.34	93.5	6.82	.32	85.9	5.47	.22	87.4	5.57	.31	88.2	7.00	.93
630	90.4	7.12	.32	91.3	7.71	.44	89.8	7.27	.16	84.5	6.79	.51	85.0	6.61	.83	84.1	7.40	1.18
1250	89.2	8.74	.24	90.1	8.92	.60	88.5	8.43	.32	80.1	7.40	.17	80.3	7.24	.07	78.6	7.40	1.37
2500	85.1	8.57	.36	85.7	8.81	.50	83.5	8.03	.85	74.9	7.05	.46	75.6	7.08	.15	73.1	7.31	1.38
5000	77.8	7.24	.05	79.2	7.80	.27	77.3	7.20	.49	67.6	5.16	.36	67.4	5.82	.19	63.1	5.86	.86
OASPL	103.1	6.10	.13	104.4	6.72	.25	103.6	6.79	.19	100.9	6.56	.21	102.1	6.81	.40	100.2	7.11	.78

RUNS 556- 563, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	84.9	7.72	.37	90.1	8.09	.84	91.0	7.41	.22	94.1	8.28	.42	95.1	8.37	.52
630	81.6	7.35	.43	87.1	7.76	.86	88.7	7.42	.41	92.0	8.20	.49	92.4	8.17	.82
1250	79.1	8.01	.52	84.2	8.37	.62	87.1	8.43	.34	91.3	9.14	.42	92.2	9.01	.56
2500	75.8	8.88	.78	82.3	8.95	.54	85.1	8.68	.29	88.5	9.36	.60	88.1	8.90	.62
5000	69.0	9.23	.50	79.8	10.*	.82	79.0	9.19	.46	83.8	10.*	.66	84.7	9.62	.53
OASPL	103.5	7.10	.29	106.2	6.77	.34	107.3	6.67	.15	108.3	7.04	.32	107.5	6.98	.42

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 180 DEG		
315	94.9	8.00	.31	98.0	8.80	.56	99.4	9.25	.65	98.7	9.05	.22	88.9	7.94	.56	.0	.00	.00
630	92.4	7.79	.37	94.6	8.39	.60	95.4	8.79	.62	90.3	7.44	.30	84.1	6.90	.62	.0	.00	.00
1250	91.3	8.80	.39	93.8	9.38	.39	92.8	9.02	.47	86.8	7.84	.16	82.3	8.08	.21	.0	.00	.00
2500	89.4	8.70	.48	90.7	9.28	.46	90.1	9.00	.59	83.9	7.83	.24	77.1	7.86	.41	.0	.00	.00
5000	85.2	9.04	.62	86.3	9.76	.58	86.2	9.45	.59	79.1	7.81	.22	71.3	8.29	.38	.0	.00	.00
OASPL	107.5	7.07	.20	107.9	7.38	.47	109.0	7.89	.48	109.2	8.10	.38	108.6	8.26	.33	.0	.00	.00

TABLE A-II.- CONTINUED.

RUNS 556- 563, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.8	7.48	.53	87.2	8.17	.40	88.5	7.67	.31	91.8	8.43	.61	91.8	8.01	.63
630	81.2	8.27	1.07	85.4	7.99	.80	87.1	7.93	.57	90.1	8.53	.82	89.5	8.10	.82
1250	75.3	8.04	.58	82.6	8.91	.51	85.7	9.08	.39	88.3	9.11	.54	89.7	9.37	.58
2500	71.4	8.83	.65	80.7	9.53	.69	83.0	9.37	.48	84.6	9.20	.60	83.9	8.90	.62
5000	64.3	9.41	.78	76.3	10.*	.64	76.4	9.59	.73	79.3	9.48	.68	79.7	9.30	.89
OASPL	99.1	7.17	.31	101.8	8.78	.36	102.9	6.92	.11	103.3	7.16	.41	103.4	7.37	.61

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	92.7	8.37	.15	92.0	7.73	.61	92.9	8.61	.74	80.5	6.09	.15	80.6	6.58	.86	80.0	7.00	.25
630	88.2	7.33	.48	86.8	7.17	.55	86.5	7.39	.45	76.3	6.69	.51	76.6	6.47	.62	73.4	6.71	.63
1250	87.2	8.30	.03	86.6	8.15	.70	87.2	8.83	.63	75.4	6.98	.46	74.5	7.60	.70	70.2	7.21	.66
2500	84.1	8.37	.15	82.9	8.05	.54	83.9	8.92	.66	73.6	7.37	.42	71.0	8.22	.64	64.7	7.18	.69
5000	79.1	8.27	.34	78.3	8.48	.69	79.8	9.26	.89	68.7	7.75	.38	64.3	6.74	.74	57.0	7.84	1.13
OASPL	102.9	7.17	.36	103.4	7.43	.38	105.0	8.22	.87	102.9	7.80	.31	103.8	7.97	.43	100.3	7.76	.45

RUNS 564- 567, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.3	7.65	.46	89.7	8.09	.39	92.4	8.23	.20	94.7	8.73	.45	95.9	8.87	.56
630	81.4	7.25	.41	88.2	8.00	.27	90.3	8.14	.32	92.8	8.62	.49	92.7	8.19	.58
1250	78.9	8.01	.52	84.0	8.84	.61	86.7	8.31	.39	91.1	9.02	.45	92.2	9.07	.69
2500	74.9	8.42	.46	81.8	8.91	.38	84.5	8.58	.22	87.7	9.10	.33	87.7	8.95	.43
5000	68.2	8.18	.59	77.1	8.48	.48	77.3	7.98	.56	81.9	8.96	.35	82.9	8.60	.89
OASPL	102.2	6.87	.19	105.1	6.67	.25	106.5	6.86	.09	108.2	7.20	.25	107.9	7.32	.38

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.8	8.49	.47	98.6	9.16	.16	99.9	9.61	.54	98.1	9.00	.38	88.9	7.81	.49	.0	.00	.00
630	92.5	7.83	.24	95.1	8.59	.12	95.3	8.76	.50	90.7	7.80	.62	84.4	7.31	.40	.0	.00	.00
1250	91.1	8.63	.04	93.7	9.27	.15	93.4	9.36	.32	86.4	7.78	.43	81.6	8.24	.52	.0	.00	.00
2500	88.1	8.43	.34	90.0	9.02	.19	89.8	9.16	.45	83.9	7.93	.31	77.4	8.13	.56	.0	.00	.00
5000	83.4	8.08	.20	88.1	9.00	.04	84.9	8.91	.38	79.2	8.06	.66	71.9	8.65	.57	.0	.00	.00
OASPL	107.2	7.04	.23	108.6	7.71	.06	108.9	8.06	.37	108.2	7.69	.39	108.1	8.17	.32	.0	.00	.00

RUNS 570- 577, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.3	7.53	.17	90.8	7.28	.14	93.7	7.21	.24	98.7	8.18	.46	98.9	8.40	.30
630	81.5	7.38	.35	87.9	8.14	.33	89.2	7.82	.28	93.0	8.43	.08	94.1	8.80	.18
1250	77.1	7.72	.62	83.6	8.59	.42	85.4	8.22	.21	91.8	9.13	.35	93.2	9.02	.13
2500	72.9	8.15	.31	80.6	9.07	.30	83.2	8.76	.18	86.9	8.94	.19	87.5	9.08	.24
5000	67.1	8.95	.17	75.7	9.12	.29	76.1	8.33	.16	81.8	9.16	.29	83.3	9.26	.34
OASPL	103.8	6.46	.21	106.5	6.38	.30	107.3	6.13	.13	110.0	6.52	.24	109.4	6.82	.24

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.0	7.97	.17	97.4	7.73	.41	97.2	7.86	.59	98.2	8.36	.33	88.6	7.18	.27	.0	.00	.00
630	93.3	8.27	.47	94.1	8.34	.08	95.3	8.54	.30	90.6	7.89	.21	85.6	7.27	.31	.0	.00	.00
1250	90.9	8.69	.18	91.7	8.94	.34	92.2	8.98	.41	86.6	7.90	.08	80.6	7.68	.21	.0	.00	.00
2500	87.9	8.74	.03	86.7	8.32	.19	88.8	8.74	.48	82.6	7.48	.22	76.0	7.71	.29	.0	.00	.00
5000	82.1	8.12	.16	81.9	8.46	.18	82.9	8.30	.38	77.9	7.51	.29	68.2	7.28	.31	.0	.00	.00
OASPL	108.5	6.14	.18	107.4	5.99	.32	108.2	6.43	.36	108.7	7.04	.28	106.9	7.26	.32	.0	.00	.00

RUNS 570- 577, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.3	7.72	.37	87.9	7.93	.20	88.9	7.58	.29	94.1	8.48	.19	95.7	8.62	.16
630	77.5	7.26	.54	85.1	8.01	.52	86.8	8.07	.45	91.6	8.78	.41	90.3	8.38	.52
1250	73.0	7.52	.80	79.7	8.35	.35	81.3	8.14	.32	87.6	8.98	.17	89.0	9.11	.31
2500	69.0	8.49	.39	76.4	8.64	.56	79.3	8.57	.35	83.5	8.96	.35	83.1	8.88	.38
5000	61.2	8.71	.29	71.4	8.92	.45	71.3	8.05	.13	77.8	9.26	.34	77.4	8.41	.59
OASPL	99.2	6.94	.15	102.2	8.62	.23	101.9	6.39	.06	104.4	6.80	.24	103.7	6.70	.40

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.5	8.40	.37	94.6	8.39	.37	93.3	8.35	.71	84.5	6.41	.02	83.7	6.70	.19	79.8	5.44	.87
630	89.4	8.14	.38	88.1	8.10	.47	87.8	7.78	.55	81.0	6.86	.51	80.4	7.40	.54	76.4	6.45	.42
1250	87.1	8.76	.32	87.6	9.22	.28	87.0	9.13	.65	77.0	7.67	.33	75.0	8.04	.58	67.7	5.87	.36
2500	82.7	8.25	.33	83.0	8.89	.36	82.4	8.57	.44	73.5	7.59	.40	70.0	8.03	.36	62.1	5.89	.37
5000	77.9	8.04	.36	77.7	8.99	.56	78.7	9.11	.64	68.7	7.61	.56	62.2	8.03	.36	53.7	5.73	.41
OASPL	103.5	6.77	.20	104.3	7.37	.38	104.8	7.63	.38	103.1	7.33	.21	102.8	7.27	.13	97.6	6.25	.43

TABLE A-II.- CONTINUED.

RUNS 578- 585, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.5	7.41	.20	98.2	8.06	.29	98.6	7.03	.14	102.4	7.94	.71	102.7	8.44	.81
630	86.6	7.64	.32	96.2	8.76	.18	97.0	8.17	.04	99.2	8.28	.87	98.8	8.87	.81
1250	80.1	7.75	.27	88.5	8.60	.44	88.8	8.38	.04	92.4	8.86	.44	93.8	9.86	.19
2500	71.9	6.18	.72	78.5	6.21	1.10	80.4	5.93	1.08	82.9	8.10	.26	84.9	8.80	.88
5000	67.3	8.45	.55	76.9	8.94	.44	77.1	8.30	.10	80.6	8.78	.67	83.3	9.15	.37
OASPL	102.4	6.00	.23	107.0	6.42	.29	107.8	5.95	.16	110.0	6.19	.88	110.7	6.72	.29

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	100.3	7.23	.28	100.4	7.42	.49	99.1	7.60	.85	96.0	7.36	.28	89.2	6.86	.68	.0	.00	.00
630	97.6	7.70	.32	96.8	7.71	.91	95.1	7.35	.80	91.1	7.21	.39	87.1	6.96	.64	.0	.00	.00
1250	92.2	8.80	.33	92.4	8.83	.49	91.0	7.94	.71	87.8	7.77	.22	82.2	7.88	.57	.0	.00	.00
2500	84.8	6.22	.66	84.4	6.03	.24	83.7	5.38	.33	80.5	5.80	.79	73.9	8.10	.79	.0	.00	.00
5000	82.9	8.38	.04	82.7	8.77	.85	84.5	8.97	.72	78.8	7.70	.30	70.6	7.70	.47	.0	.00	.00
OASPL	109.8	6.17	.11	109.2	6.23	.55	108.9	6.19	.02	108.5	6.79	.16	105.9	6.92	.36	.0	.00	.00

RUNS 578- 585, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.2	7.04	.25	90.4	7.48	.34	90.6	6.98	.19	93.8	7.28	.09	94.2	7.80	.41
630	82.3	7.18	.29	87.4	7.37	.17	88.1	7.16	.14	91.6	7.96	.26	91.0	7.99	.44
1250	74.9	7.30	.48	81.5	7.74	.37	83.1	7.65	.29	88.2	8.63	.43	88.3	8.07	.38
2500	67.0	6.26	.92	74.2	5.99	.78	78.3	6.55	.61	81.9	7.47	.55	81.4	7.28	1.18
5000	61.8	8.52	.42	72.3	8.75	.32	73.3	8.18	.05	78.5	9.19	.20	78.9	8.84	.49
OASPL	98.0	6.12	.18	101.0	6.06	.21	100.8	5.77	.08	103.6	6.41	.18	103.1	6.30	.48

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.3	6.73	.46	91.3	6.63	.79	90.3	6.64	.40	86.3	6.34	.38	87.9	6.89	.12	87.8	6.77	.43
630	88.5	6.99	.30	86.7	6.96	.71	86.6	6.55	.64	83.6	6.93	.20	86.7	8.05	.14	84.1	7.28	.18
1250	86.1	7.79	.22	85.6	7.86	.65	85.8	7.89	.92	77.8	7.06	.39	79.8	7.71	.31	79.1	7.31	.10
2500	79.8	5.88	.89	79.1	6.26	.90	78.8	5.73	.82	71.1	4.58	.95	70.7	4.36	1.43	71.1	4.89	.82
5000	78.3	7.83	.39	76.5	8.32	1.07	77.4	7.99	.90	69.9	7.64	.24	68.9	8.07	.30	68.0	8.06	.04
OASPL	102.0	6.12	.25	102.4	6.45	.43	102.6	6.88	.36	101.6	6.64	.28	104.1	7.43	.21	102.0	7.87	.06

RUNS 586- 589, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	86.6	6.43	.25	90.7	6.24	.42	93.9	6.41	.49	97.9	7.33	.07	98.3	7.59	.08
630	85.7	7.76	.21	91.9	7.83	.18	92.4	7.84	.31	95.7	8.46	.45	95.1	8.58	.42
1250	78.0	7.63	.43	85.0	8.19	.34	86.8	8.47	.17	91.9	9.22	.15	92.1	9.20	.06
2500	74.4	9.07	.30	81.2	9.30	.17	82.8	8.70	.11	85.9	4.93	.14	87.1	9.38	.34
5000	66.9	9.33	.25	76.8	9.57	.29	76.5	8.65	.11	80.8	9.19	.13	82.8	9.38	.34
OASPL	102.2	6.38	.10	105.1	6.00	.17	106.5	5.83	.14	109.4	6.25	.43	109.5	6.51	.11

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.4	7.28	.14	96.7	7.04	.58	95.3	7.16	.76	96.5	7.61	.17	94.0	7.70	.21	83.0	6.26	.54
630	94.7	8.34	.14	94.4	8.11	.64	93.9	7.82	.53	93.7	8.19	.26	91.7	8.43	.08	81.9	7.20	.18
1250	90.7	8.81	.12	91.0	8.88	.47	91.5	8.89	.60	89.0	8.39	.04	88.3	8.30	.29	75.4	7.52	.42
2500	86.4	8.51	.11	86.3	8.58	.36	87.7	8.73	.36	85.6	8.44	.21	81.7	8.46	.36	69.8	7.39	.29
5000	82.0	8.63	.05	81.0	8.49	.43	82.7	8.53	.49	79.8	8.11	.11	74.3	8.46	.36	62.5	7.49	.67
OASPL	109.1	6.07	.12	108.4	6.02	.59	108.1	6.00	.70	106.9	6.19	.06	105.5	6.46	.08	98.1	6.56	.17

RUNS 590- 597, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.1	6.72	.06	93.5	6.79	.34	96.8	6.37	.20	98.3	6.27	.43	100.0	7.23	.16
630	82.6	8.28	.07	89.3	7.03	.33	90.9	7.14	.09	93.8	7.58	.30	94.0	7.82	.25
1250	78.9	7.73	.20	85.0	8.28	.50	87.4	8.46	.29	91.1	8.74	.48	93.0	9.27	.40
2500	73.8	8.38	.09	81.9	8.95	.54	83.7	8.71	.24	86.0	8.65	.36	87.2	9.07	.30
5000	66.6	8.67	.16	77.0	9.17	.51	77.8	9.00	.26	80.8	8.98	.41	83.3	9.31	.36
OASPL	102.5	6.13	.38	106.5	6.41	.13	108.5	6.25	.04	109.9	6.13	.45	110.3	6.40	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.8	6.72	.18	97.6	6.73	.34	97.1	7.05	.39	94.1	6.83	.31	87.8	6.84	.21	.0	.00	.00
630	93.4	7.46	.36	93.7	7.36	.18	94.3	7.61	.30	89.2	6.80	.25	85.0	6.39	.28	.0	.00	.00
1250	91.1	8.47	.17	90.7	8.31	.51	90.9	8.41	.44	86.2	7.61	.17	81.0	7.34	.30	.0	.00	.00
2500	87.3	8.53	.29	87.2	8.52	.49	87.7	8.42	.12	82.7	7.53	.07	76.4	7.47	.07	.0	.00	.00
5000	82.5	8.43	.23	81.4	8.38	.50	83.0	8.43	.56	78.2	7.71	.06	69.9	7.75	.13	.0	.00	.00
OASPL	108.5	5.67	.09	107.7	5.68	.61	107.9	5.86	.39	108.0	6.83	.17	105.4	6.96	.03	.0	.00	.00

TABLE A-II.- CONTINUED.

RUNS 590- 597, MICROPHONES 30 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.7	6.87	.31	89.2	7.10	.45	90.8	7.07	.39	94.7	7.80	.30	95.3	7.82	.23
630	80.1	7.12	.53	86.0	7.31	.46	86.7	7.28	.11	90.8	7.74	.37	91.2	8.02	.50
1250	74.1	7.62	.87	81.1	8.23	.52	83.7	8.20	.15	88.0	8.78	.25	89.3	9.08	.28
2500	69.2	8.25	.59	77.1	8.75	.73	80.2	8.30	.21	83.9	8.93	.26	83.3	8.73	.54
5000	61.7	8.86	.26	70.6	8.61	.72	73.3	8.30	.21	78.4	9.06	.39	79.4	9.01	.56
OASPL	97.4	6.38	.11	100.4	6.11	.32	101.1	5.93	.04	104.5	6.60	.24	104.2	6.86	.34

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.6	7.57	.02	94.9	7.69	.12	92.1	6.97	.27	83.9	8.52	.10	88.9	6.79	.66	88.7	7.28	.40
630	90.1	7.61	.17	88.9	7.69	.12	89.1	7.26	.21	82.4	8.38	.36	84.8	6.95	.80	85.3	7.60	.79
1250	88.7	8.91	.26	88.7	9.10	.11	87.9	8.46	.37	78.4	7.33	.48	79.7	7.08	.56	80.7	8.11	.70
2500	84.8	8.85	.05	84.5	8.90	.19	84.4	8.57	.25	73.8	7.12	.46	74.9	7.77	.44	75.1	8.18	.32
5000	79.9	8.70	.09	79.6	9.18	.26	80.2	8.78	.41	69.0	7.28	.47	67.1	7.97	.89	66.9	8.21	.76
OASPL	103.7	6.46	.13	104.1	6.99	.11	103.6	6.93	.14	101.0	6.46	.15	103.7	7.34	.60	102.9	7.82	.30

RUNS 598- 605, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.6	6.22	.30	95.6	6.79	.34	99.1	6.66	.31	100.2	6.61	.43	98.9	6.72	.23
630	88.8	7.15	.18	91.5	7.09	.26	93.6	7.83	.17	98.2	7.75	.12	95.2	8.04	.29
1250	80.8	7.84	.16	88.0	8.29	.29	89.8	8.42	.09	93.5	9.40	.21	93.9	9.40	.39
2500	75.4	8.62	.19	86.0	9.19	.20	86.7	8.84	.07	88.8	9.30	.16	88.9	9.43	.28
5000	67.7	8.93	.11	80.0	9.44	.22	80.2	9.02	.07	83.7	9.66	.25	83.7	9.33	.28
OASPL	103.6	5.60	.42	107.7	5.91	.24	108.9	5.64	.07	110.5	6.24	.16	109.4	6.87	.27

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.8	6.55	.25	97.4	6.34	.74	96.6	6.42	.86	93.2	6.81	.24	88.8	6.04	.83	.0	100	.00
630	94.1	7.89	.08	94.8	7.48	.36	94.3	7.44	.30	90.3	6.92	.10	86.8	7.13	.52	.0	100	.00
1250	92.6	9.02	.07	91.8	8.35	.57	92.1	8.47	.62	88.0	8.17	.36	84.0	8.25	.39	.0	100	.00
2500	88.3	8.76	.18	88.1	8.88	.39	88.2	8.47	.62	84.8	8.38	.09	78.4	7.80	.62	.0	100	.00
5000	83.1	8.60	.30	82.8	8.62	.74	83.7	8.81	.48	79.0	8.11	.11	73.1	8.22	.64	.0	100	.00
OASPL	108.1	5.86	.09	108.6	6.22	.55	108.0	6.11	.40	107.0	6.85	.30	104.6	6.87	.49	.0	100	.00

RUNS 598- 605, MICROPHONES 30 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.1	6.44	.35	90.4	6.61	.30	90.5	6.18	.08	94.4	6.75	.27	94.3	6.89	.08
630	81.8	7.04	.44	88.2	7.80	.29	88.9	7.58	.29	91.2	7.83	.34	91.2	7.64	.42
1250	75.8	8.04	.58	83.4	8.40	.59	85.8	8.37	.29	90.1	8.91	.34	89.6	8.76	.32
2500	70.9	5.80	.56	79.3	8.91	.49	83.2	8.73	.11	86.1	9.21	.34	85.2	9.14	.38
5000	62.2	8.92	.66	73.1	9.20	.51	75.2	8.30	.21	79.7	9.21	.53	79.9	9.08	.56
OASPL	99.2	6.14	.29	102.8	5.99	.29	102.8	5.76	.05	104.4	6.27	.26	103.7	6.36	.28

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	93.0	6.68	.36	94.8	7.43	.45	93.5	6.76	.24	84.9	5.56	.38	88.0	5.84	.05	84.9	6.05	.23
630	89.7	7.27	.16	90.3	7.65	.26	90.1	7.38	.36	83.6	6.42	.30	83.4	7.04	.64	82.2	7.07	.33
1250	87.9	8.49	.21	90.1	9.21	.45	90.0	9.15	.37	81.4	7.86	.57	80.8	8.48	.59	78.3	8.17	.34
2500	83.7	8.46	.14	85.2	8.96	.49	84.6	8.48	.44	83.5	9.41	3.89	75.2	8.30	.52	70.8	7.59	.82
5000	78.6	8.39	.24	80.4	9.33	.49	80.4	8.86	.52	71.4	7.60	.30	69.0	8.48	.59	62.0	7.58	.55
OASPL	102.8	6.20	.14	104.4	6.98	.32	104.0	6.95	.25	101.1	6.82	.11	101.0	6.91	.33	98.9	6.70	.08

RUNS 606- 613, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.7	6.63	.24	98.8	7.34	.34	100.3	6.36	.82	100.2	5.93	.89	99.5	6.30	.32
630	87.5	7.10	.04	94.9	7.26	.39	95.8	7.33	.83	96.6	7.40	.24	97.2	7.87	.17
1250	81.9	7.79	.29	89.0	8.07	.38	91.1	8.51	.11	93.1	8.70	.42	94.4	9.18	.26
2500	71.3	8.80	.76	82.2	6.61	1.00	84.6	7.13	.84	84.2	6.15	.50	85.7	6.97	.96
5000	66.3	7.04	.14	77.9	7.89	.31	78.9	7.65	.18	81.8	8.31	.51	83.9	8.88	.02
OASPL	103.3	5.58	.22	108.0	5.91	.24	109.1	5.61	.12	110.3	5.95	.36	110.6	6.46	.28

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.0	5.89	.05	98.2	5.98	.32	97.6	6.16	.38	92.7	6.03	.08	89.0	6.01	.53	.0	100	.00
630	94.9	7.09	.26	95.4	7.16	.32	94.4	6.97	.27	89.8	6.58	.11	88.2	7.31	.21	.0	100	.00
1250	92.0	8.34	.11	92.3	7.99	.46	92.2	8.17	.51	87.6	7.82	.07	84.3	8.02	.42	.0	100	.00
2500	84.2	8.84	1.21	83.3	8.13	.81	83.8	5.42	.71	79.7	5.49	.55	74.9	6.38	1.24	.0	100	.00
5000	82.3	7.76	.20	82.6	7.99	.46	83.0	7.69	.67	77.0	6.75	.03	71.9	6.76	.36	.0	100	.00
OASPL	108.7	5.81	.18	109.0	6.01	.37	109.1	6.25	.36	106.8	6.73	.37	104.2	6.82	.25	.0	100	.00

TABLE A-II.- CONTINUED.

RUNS 606- 613, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	86.1	6.51	.27	91.5	6.60	.11	91.6	6.25	.27	95.1	6.62	.28	94.7	6.71	.37
630	83.7	7.14	.28	89.4	7.31	.47	89.8	7.13	.18	91.3	7.18	.29	91.4	7.27	.52
1250	76.8	7.84	.54	84.0	7.92	.43	85.6	7.54	.35	89.3	8.23	.17	89.4	8.19	.26
2500	88.1	6.36	.98	74.6	5.28	1.60	81.2	6.93	.69	84.0	7.67	.68	82.4	7.33	.69
5000	81.3	7.21	.28	71.3	7.12	.21	75.1	7.32	.34	79.5	8.71	.29	79.5	8.46	.40
OASPL	96.7	5.83	.33	102.0	5.65	.40	102.3	5.48	.08	104.5	6.19	.23	104.0	6.30	.31

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	92.8	6.26	.16	94.6	7.06	.44	93.9	6.70	.37	84.7	4.88	.34	86.5	5.88	.27	89.8	7.31	.15
630	90.0	6.78	.15	90.1	7.17	.36	89.8	6.70	.19	83.4	5.90	.31	84.3	6.80	.11	88.7	7.88	.32
1250	88.1	8.08	.12	89.0	8.38	.40	89.6	6.61	.20	79.8	6.68	.57	81.7	7.86	.31	80.8	8.07	.14
2500	81.9	6.64	.80	83.2	7.36	.64	82.7	6.89	.68	71.9	4.33	1.31	71.4	4.32	1.61	70.3	5.08	1.22
5000	78.6	7.70	.11	79.4	8.37	.28	80.0	8.11	.44	68.9	8.74	.40	68.8	8.76	.31	65.3	7.82	.30
OASPL	102.7	5.99	.10	104.0	6.62	.26	103.9	6.76	.22	99.7	6.17	.21	101.0	6.84	.23	100.8	7.28	.14

RUNS 614- 617, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	90.2	7.66	.46	97.4	7.95	.35	98.4	7.10	.03	102.5	8.18	.04	100.8	7.94	.32
630	87.1	7.71	.31	95.3	8.16	.27	96.5	7.82	.23	100.2	8.55	.29	99.3	8.34	.14
1250	81.3	7.09	.33	88.5	8.36	.28	89.0	8.29	.22	93.0	8.95	.29	93.2	8.87	.27
2500	72.4	6.47	.62	79.5	6.62	.94	81.5	6.59	.87	84.8	7.04	.39	85.6	7.39	.67
5000	67.7	8.58	.19	76.9	8.98	.24	77.3	8.37	.10	82.2	9.39	.39	82.8	9.16	.12
OASPL	102.4	6.17	.07	106.8	8.31	.11	108.0	6.17	.05	110.3	6.80	.33	109.6	6.99	.13

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	98.9	7.28	.09	100.1	7.50	.18	99.4	7.65	.36	95.4	7.70	.20	89.5	7.50	.30	.0	.00	.00
630	97.8	7.82	.23	97.4	7.70	.48	94.2	6.97	.27	89.8	7.12	.21	86.2	7.07	.34	.0	.00	.00
1250	91.2	8.34	.11	92.3	8.38	.50	91.2	7.96	.53	86.0	7.57	.02	83.0	7.70	.04	.0	.00	.00
2500	85.1	6.68	.56	85.4	6.80	.20	84.6	5.99	.30	79.4	5.55	.68	75.2	5.81	.83	.0	.00	.00
5000	82.1	8.44	.26	82.5	8.55	.74	83.0	8.39	.63	78.1	7.81	.05	73.1	8.33	.19	.0	.00	.00
OASPL	108.2	6.49	.02	108.6	6.64	.43	108.3	6.66	.35	107.8	7.40	.25	107.4	7.91	.18	.0	.00	.00

RUNS 668- 675, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	84.9	7.82	.39	89.0	7.89	.37	90.4	7.62	.23	94.8	8.60	.42	94.7	8.66	.84
630	80.4	7.15	.20	85.3	7.68	.60	88.2	7.78	.04	90.9	8.23	.17	92.0	8.42	.46
1250	77.2	7.75	.27	82.6	8.45	.53	85.2	8.27	.14	90.5	9.29	.40	91.6	9.43	.27
2500	73.8	8.63	.26	78.8	8.73	.54	82.8	8.52	.09	86.3	9.06	.15	86.6	9.07	.37
5000	66.8	8.98	.24	72.3	8.71	.35	75.5	8.44	.22	80.3	9.46	.23	81.7	9.19	.19
OASPL	102.9	6.99	.36	105.0	6.70	.04	106.1	6.57	.18	107.7	7.14	.21	107.4	7.35	.16

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	94.8	8.31	.11	96.9	8.78	.30	98.5	9.21	.34	98.3	9.44	.17	86.6	7.18	.29	.0	.00	.00
630	92.1	8.01	.19	93.8	8.50	.32	94.5	8.64	.36	90.2	7.88	.18	81.2	6.84	.39	.0	.00	.00
1250	91.2	9.04	.13	92.3	9.29	.16	92.9	9.34	.25	86.3	8.22	.14	80.1	7.70	.29	.0	.00	.00
2500	86.8	8.63	.04	87.8	8.84	.19	89.5	9.19	.20	82.8	8.11	.11	76.0	7.68	.36	.0	.00	.00
5000	80.5	8.43	.10	82.6	9.20	.20	83.3	9.09	.47	76.4	8.09	.24	70.4	8.01	.47	.0	.00	.00
OASPL	106.5	6.96	.03	106.8	7.21	.23	107.6	7.54	.34	108.0	8.07	.08	107.0	8.20	.25	.0	.00	.00

RUNS 668- 675, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	80.3	7.82	.32	85.1	7.94	.62	86.1	7.13	.10	90.9	8.44	.21	90.1	7.96	.11
630	75.2	6.81	.67	82.3	7.46	.36	85.1	7.65	.40	87.6	8.14	.32	87.8	7.08	.18
1250	71.6	6.97	.63	78.2	8.02	.50	81.7	8.18	.21	86.4	8.96	.31	86.4	8.84	.28
2500	68.1	8.13	.46	75.4	8.63	.48	78.8	8.18	.21	81.7	8.72	.23	80.9	8.23	.10
5000	60.1	8.50	.34	68.8	8.77	.22	71.2	8.25	.22	75.0	8.81	.42	74.6	7.96	.11
OASPL	97.7	6.98	.06	100.7	6.73	.14	101.0	6.54	.17	101.7	6.88	.16	100.7	6.61	.12

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	91.5	8.14	.18	92.9	8.41	.29	91.7	7.85	.35	79.8	5.77	.42	79.4	7.01	.26	79.1	7.47	.25
630	87.4	7.48	.06	87.0	7.21	.38	85.7	6.98	.84	76.0	5.68	.57	73.8	6.24	.84	71.8	6.71	.32
1250	85.9	8.29	.28	86.8	8.75	.23	87.0	8.70	.43	75.4	6.88	.43	71.7	7.37	.59	68.3	7.80	.88
2500	81.4	8.10	.10	82.5	8.39	.24	82.1	8.03	.22	71.5	6.65	.30	68.3	7.94	.19	64.5	8.05	.83
5000	75.5	8.10	.10	76.7	8.68	.32	77.5	8.44	.38	65.5	6.80	.35	61.9	8.23	.52	54.5	7.78	.69
OASPL	101.5	6.93	.14	102.9	7.51	.19	104.0	7.63	.33	101.8	7.77	.07	101.1	7.91	.21	99.7	8.20	.13

TABLE A-II.- CONTINUED.

RUNS 676- 679, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.4	7.51	.36	97.3	7.82	.57	98.3	6.30	.64	99.0	6.13	.75	101.1	7.28	.14
630	85.0	6.97	.32	93.0	7.73	.12	94.7	7.60	.32	95.6	7.81	.41	96.4	8.17	.27
1250	79.7	8.04	.29	86.3	8.37	.22	88.8	8.54	.14	91.6	9.08	.40	93.7	9.59	.27
2500	69.1	5.39	1.43	77.6	8.33	.92	80.7	6.15	.97	81.1	5.53	.65	83.4	6.20	1.23
5000	64.7	7.37	.36	75.3	7.86	.56	76.1	7.38	.40	78.8	8.18	.95	82.2	8.79	.19
OASPL	102.0	6.28	.17	106.3	6.52	.24	108.7	6.36	.03	109.9	6.35	.44	111.0	6.91	.26

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.9	6.59	.12	98.9	6.84	.40	97.8	6.80	.34	92.7	6.55	.20	86.9	6.34	.91	.0	.00	.00
630	94.7	7.43	.21	94.2	7.17	.45	93.8	7.23	.32	89.3	6.92	.10	85.0	6.77	.80	.0	.00	.00
1250	90.9	8.48	.19	91.5	8.81	.37	90.4	7.90	.34	86.6	7.95	.09	81.6	7.82	.46	.0	.00	.00
2500	82.3	5.49	1.19	81.5	4.72	.98	82.8	5.17	.75	78.5	5.33	1.10	71.1	4.27	1.79	.0	.00	.00
5000	79.5	7.66	.25	80.2	7.66	.73	81.1	7.60	.55	75.4	7.06	.24	69.7	6.57	.38	.0	.00	.00
OASPL	109.5	6.11	.09	108.8	6.08	.63	108.7	6.11	.61	106.0	6.50	.12	102.9	6.88	.42	.0	.00	.00

RUNS 680- 684, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	30.0	11.*	13.*	97.1	7.52	.44	98.3	6.18	.65	100.4	6.56	.58	100.9	7.08	.13
630	29.3	10.*	12.*	93.0	7.67	.31	95.2	7.60	.12	97.3	8.05	.13	97.1	8.20	.37
1250	29.0	10.*	12.*	85.8	7.93	.40	88.8	8.22	.27	93.3	9.20	.24	93.1	9.03	.23
2500	27.7	10.*	12.*	78.0	6.09	.96	81.9	6.33	1.05	83.8	6.23	.93	84.2	6.38	1.01
5000	23.9	8.86	10.*	75.0	7.10	.54	76.0	6.91	.29	80.6	5.35	.35	82.0	8.35	.33
OASPL	38.0	14.*	16.*	108.4	6.37	.18	108.9	6.15	.17	111.1	6.59	.23	110.7	6.89	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.8	6.36	.19	99.1	6.76	.47	99.5	7.32	.19	94.4	6.90	.67	87.8	6.50	.45	.0	.00	.00
630	95.1	7.34	.13	95.5	7.52	.52	94.6	7.32	.19	89.8	6.93	.21	85.1	6.63	.40	.0	.00	.00
1250	91.8	8.65	.06	91.3	8.21	.64	92.3	8.53	.16	86.6	7.70	.18	81.3	7.51	.36	.0	.00	.00
2500	83.7	5.57	1.10	83.1	5.07	.90	85.1	5.78	1.15	80.2	5.62	1.00	72.5	4.52	1.47	.0	.00	.00
5000	80.8	7.44	.22	80.6	7.28	.79	82.7	7.82	.32	76.5	6.91	.14	69.2	6.16	.29	.0	.00	.00
OASPL	109.5	5.92	.09	108.7	5.88	.55	109.7	6.40	.26	107.5	6.74	.23	102.8	6.67	.38	.0	.00	.00

RUNS 685- 688, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	88.9	7.66	.17	91.4	7.83	.24	94.7	8.55	.34	94.9	8.45	.53
630	.0	.00	.00	86.2	7.53	.88	89.2	7.93	.31	92.1	8.54	.17	92.7	8.48	.53
1250	.0	.00	.00	82.6	8.22	.64	86.3	8.48	.24	91.0	9.25	.21	91.7	9.06	.37
2500	.0	.00	.00	79.5	8.73	.54	84.0	8.65	.23	87.0	9.14	.27	87.3	9.07	.37
5000	.0	.00	.00	74.1	9.05	.50	76.7	8.55	.16	81.3	9.54	.45	82.0	9.16	.57
OASPL	.0	.00	.00	104.8	6.25	.23	106.5	6.46	.14	108.2	7.04	.08	107.6	7.03	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.3	8.18	.26	97.7	8.61	.37	99.4	9.18	.44	98.9	9.33	.20	87.4	7.81	.92	.0	.00	.00
630	92.7	8.06	.44	94.5	8.58	.55	95.4	8.76	.53	90.6	7.71	.42	82.5	6.93	1.02	.0	.00	.00
1250	90.7	8.51	.22	92.7	9.14	.42	93.0	9.10	.39	87.0	8.08	.20	80.4	7.58	.55	.0	.00	.00
2500	87.4	8.43	.34	88.9	9.00	.26	89.1	8.75	.32	83.9	8.02	.50	76.5	7.75	.69	.0	.00	.00
5000	81.6	8.31	.17	83.5	9.05	.15	84.0	8.98	.44	78.2	5.16	.51	69.9	7.77	.44	.0	.00	.00
OASPL	107.0	6.77	.12	107.8	7.28	.29	106.8	7.72	.32	109.0	8.02	.39	107.3	8.07	.38	.0	.00	.00

RUNS 689- 692, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	90.0	8.04	.25	90.8	7.58	.29	95.1	8.56	.36	94.7	8.20	.45
630	.0	.00	.00	86.4	7.88	.50	88.2	7.55	.23	91.5	8.06	.45	92.1	8.19	.58
1250	.0	.00	.00	82.7	8.19	.58	85.8	8.16	.20	90.8	9.01	.13	92.3	9.24	.48
2500	.0	.00	.00	80.5	9.00	.38	84.4	8.69	.21	87.5	9.19	.20	87.8	9.12	.50
5000	.0	.00	.00	74.2	9.02	.43	76.8	8.61	.29	81.0	9.28	.27	82.1	9.07	.69
OASPL	.0	.00	.00	105.1	6.51	.28	106.7	6.49	.16	108.2	7.05	.20	107.6	7.02	.39

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	94.4	7.75	.14	97.2	8.63	.36	99.2	9.24	.33				87.7	7.59	.49	.0	.00	.00
630	92.3	7.90	.32	93.8	8.34	.47	95.4	8.80	.43				82.6	6.87	.31	.0	.00	.00
1250	91.2	8.66	.12	92.6	9.00	.38	93.6	9.22	.28				80.1	7.48	.13	.0	.00	.00
2500	88.0	8.56	.11	88.8	8.84	.59	89.6	8.94	.60				78.0	6.97	3.89	.0	.00	.00
5000	81.9	8.24	.18	83.3	8.94	.20	84.6	9.08	.24				71.5	6.49	.39	.0	.00	.00
OASPL	106.7	6.77	.08	107.5	7.24	.37	106.8	7.82	.31				107.1	7.99	.25	.0	.00	.00

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OF POOR QUALITY

TABLE A-II.- CONTINUED.

RUNS 693- 696, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	88.7	7.63	.54	90.2	7.22	.27	94.7	8.83	.41	94.7	8.26	.58
630	.0	.00	.00	85.5	7.63	.54	88.9	7.81	.08	92.2	8.43	.23	92.1	8.14	.32
1250	.0	.00	.00	82.1	8.02	.50	86.0	8.17	.39	91.1	9.14	.27	91.6	9.07	.37
2500	.0	.00	.00	79.2	8.38	.52	83.5	8.26	.27	86.9	8.97	.29	87.1	8.77	.48
5000	.0	.00	.00	72.5	7.56	.55	75.7	7.58	.29	80.0	8.46	.30	81.0	8.18	.70
OASPL	.0	.00	.00	104.3	6.32	.18	105.4	6.10	.13	108.0	7.11	.17	106.9	6.90	.39

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.4	8.21	.36	97.4	8.75	.32	99.7	9.37	.32				87.6	7.41	.42	.0	.00	.00
630	92.9	7.86	.31	93.9	8.25	.33	95.9	8.66	.52				82.7	7.06	.41	.0	.00	.00
1250	91.0	8.45	.15	92.6	8.94	.20	93.8	9.25	.37				80.8	7.86	.19	.0	.00	.00
2500	87.6	8.47	.30	88.5	8.78	.41	89.9	9.04	.40				76.3	7.63	.43	.0	.00	.00
5000	81.0	7.69	.25	82.7	8.49	.57	84.1	8.77	.66				70.3	7.89	.49	.0	.00	.00
OASPL	108.9	6.80	.14	107.4	7.35	.30	108.6	7.66	.35				107.3	8.20	.26	.0	.00	.00

RUNS 697- 700, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	88.9	7.56	.41	90.7	7.37	.16	95.0	8.58	.42	95.8	8.47	.30
630	.0	.00	.00	85.9	7.64	.42	88.2	7.45	.16	91.7	8.23	.42	93.2	8.42	.46
1250	.0	.00	.00	82.9	8.31	.39	85.5	8.01	.27	91.1	9.06	.15	91.2	8.88	.23
2500	.0	.00	.00	79.3	8.43	.34	83.7	8.28	.26	87.0	8.88	.27	86.9	8.81	.29
5000	.0	.00	.00	73.0	7.88	.50	76.5	7.83	.24	80.6	8.59	.42	81.5	8.39	.71
OASPL	.0	.00	.00	104.9	6.49	.12	105.8	6.14	.14	107.9	6.97	.21	107.4	7.05	.23

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.7	8.23	.24	98.0	8.84	.40	100.4	9.55	.41	98.2	8.92	.37	87.3	7.22	.60	.0	.00	.00
630	93.2	8.09	.51	94.6	8.60	.53	95.6	8.72	.56	89.9	7.30	.15	81.5	6.53	.92	.0	.00	.00
1250	90.8	8.55	.16	92.7	9.01	.32	92.6	8.78	.25	86.3	7.53	.07	79.3	7.26	.63	.0	.00	.00
2500	87.2	8.25	.33	89.1	9.00	.26	89.8	9.01	.13	82.8	7.48	.22	76.0	7.39	.73	.0	.00	.00
5000	81.2	7.78	.28	83.3	8.73	.45	84.0	8.70	.37	76.6	7.30	.15	69.9	7.68	.86	.0	.00	.00
OASPL	108.7	6.80	.19	107.5	7.42	.33	108.8	7.78	.39	108.7	7.87	.43	106.6	7.72	.37	.0	.00	.00

RUNS 701- 704, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	89.3	7.74	.12	90.9	7.39	.34	94.5	8.26	.26	95.6	8.61	.29
630	.0	.00	.00	85.2	7.44	.60	88.3	7.49	.13	92.2	8.38	.22	92.8	8.34	.46
1250	.0	.00	.00	82.4	8.09	.51	85.8	8.27	.27	91.3	9.25	.32	91.9	8.98	.06
2500	.0	.00	.00	79.5	8.61	.32	83.4	8.37	.21	87.1	9.01	.32	87.4	8.85	.05
5000	.0	.00	.00	73.9	8.81	.42	76.4	8.26	.27	80.6	9.09	.22	81.5	8.78	.36
OASPL	.0	.00	.00	106.3	6.35	.21	106.2	6.28	.14	108.1	6.99	.25	107.5	6.95	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	95.7	8.23	.24	98.4	8.94	.13	99.7	9.12	.29	98.7	8.96	.06	88.0	7.82	.39	.0	.00	.00
630	92.7	7.95	.50	95.3	8.90	.50	95.4	8.65	.32	90.3	7.80	.11	82.9	7.12	.34	.0	.00	.00
1250	91.1	8.70	.16	93.2	9.29	.21	92.5	8.79	.32	86.9	7.86	.14	81.9	8.44	.38	.0	.00	.00
2500	87.9	8.60	.19	89.2	9.13	.30	89.6	8.85	.45	83.3	7.80	.33	78.0	8.46	.37	.0	.00	.00
5000	82.3	8.46	.14	83.0	8.88	.27	83.6	8.66	.32	77.8	7.97	.34	71.7	8.61	.49	.0	.00	.00
OASPL	106.8	6.70	.11	108.0	7.42	.02	108.4	7.50	.38	109.5	8.10	.16	107.2	8.00	.46	.0	.00	.00

RUNS 705- 708, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	.0	.00	.00	97.4	7.43	.58	98.5	6.20	.71	100.7	6.55	.55	100.3	6.71	.19
630	.0	.00	.00	92.9	7.45	.05	95.2	7.49	.09	97.4	8.05	.16	96.9	7.96	.08
1250	.0	.00	.00	86.6	8.06	.29	88.9	8.17	.23	93.1	9.04	.12	93.1	8.94	.41
2500	.0	.00	.00	78.0	6.07	1.09	81.8	6.32	1.04	83.6	6.20	.93	83.7	6.18	1.04
5000	.0	.00	.00	75.2	7.28	.53	76.0	7.04	.15	80.6	8.31	.35	81.4	8.09	.36
OASPL	.0	.00	.00	106.2	6.19	.26	108.9	6.02	.05	111.4	6.65	.20	110.8	6.53	.30

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.9	6.49	.38	99.2	6.83	.89	98.5	6.85	.09	93.3	6.36	.35	87.6	6.53	.42	.0	.00	.00
630	95.7	7.58	.32	94.6	7.23	.32	94.5	7.20	.21	89.3	6.56	.15	85.0	6.60	.42	.0	.00	.00
1250	91.2	8.21	.12	91.8	8.44	.37	91.3	8.04	.47	86.9	7.69	.27	81.2	7.80	.29	.0	.00	.00
2500	82.9	5.37	.83	81.6	4.62	.91	83.9	5.32	.81	79.8	5.53	.80	72.1	4.56	1.78	.0	.00	.00
5000	80.5	7.36	.23	80.1	7.13	.82	82.4	7.64	.43	76.4	6.83	.13	69.4	6.41	.16	.0	.00	.00
OASPL	109.6	5.88	.33	108.5	5.70	.60	109.5	6.17	.40	107.2	6.52	.10	102.7	6.79	.39	.0	.00	.00

TABLE A-II.- CONTINUED.

RUNS 709- 716, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.3	7.14	.28	94.2	7.49	.09	97.1	6.98	.21	100.4	7.02	.29	101.4	7.48	.13
630	87.9	7.81	.27	91.5	7.32	.22	94.4	7.51	.17	97.8	8.11	.11	98.1	8.28	.28
1250	81.5	8.29	.35	85.6	8.51	.27	88.0	8.63	.05	90.5	8.84	.07	91.5	9.09	.22
2500	72.6	8.10	.47	77.4	8.15	.31	82.4	8.68	.20	85.4	9.14	.19	85.3	8.97	.29
5000	63.0	7.44	.51	70.4	7.76	.21	73.2	7.61	.24	77.4	8.36	.11	80.0	8.71	.29
OASPL	102.9	6.21	.29	106.7	6.44	.22	108.6	6.10	.12	110.1	6.21	.12	110.6	6.64	.26

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	100.5	6.46	.16	100.3	6.44	.67	98.9	6.26	.45	91.1	5.99	.14	86.5	6.56	.48	78.0	5.48	.08
630	98.3	7.42	.19	94.7	7.43	.62	93.7	7.44	.13	88.1	7.10	.03	83.2	6.73	.56	72.1	5.38	.24
1250	90.4	8.74	.22	90.2	8.55	.43	90.2	8.65	.50	86.1	8.11	.11	80.7	7.02	.24	66.4	5.82	.10
2500	85.6	8.64	.24	84.3	8.19	.32	86.5	8.69	.25	81.9	7.79	.30	75.9	7.02	.24	59.1	5.74	.32
5000	79.3	7.95	.09	78.9	7.92	.47	81.3	8.53	.44	76.1	7.56	.10	69.9	7.50	.29	50.3	5.79	.14
OASPL	109.7	6.03	.14	108.6	5.91	.54	108.3	5.97	.25	104.1	5.90	.56	103.2	7.48	.55	95.9	6.03	.07

RUNS 709- 716, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.1	6.84	.50	88.1	7.09	.14	91.3	6.65	.08	92.6	7.08	.51	92.9	7.43	.72
630	79.4	7.12	.64	85.4	7.68	.36	87.3	7.49	.13	89.0	7.70	.50	87.9	7.69	.67
1250	72.7	7.05	.64	80.1	7.98	.56	83.0	8.23	.20	86.6	9.06	.39	86.5	8.70	.48
2500	65.5	7.36	.72	73.2	8.05	.57	78.9	8.49	.04	82.3	9.30	.42	81.3	8.84	.49
5000	56.4	7.06	.82	66.1	7.74	.49	69.8	7.71	.06	74.9	8.82	.44	76.7	8.98	.43
OASPL	96.8	5.91	.36	100.5	5.99	.33	102.5	5.89	.03	103.2	6.19	.32	102.2	6.24	.49

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.7	6.08	.34	90.8	6.88	.31	91.4	7.46	.52	81.3	5.13	.07	83.6	6.04	.18	88.6	7.14	.31
630	85.7	6.59	.15	86.5	6.91	.39	87.7	7.56	.49	79.1	5.99	.71	77.2	5.86	.06	81.3	6.93	.22
1250	85.1	8.13	.13	87.6	8.70	.40	87.2	8.65	.28	78.4	7.46	.30	73.0	6.04	.22	74.7	7.61	.18
2500	81.2	8.22	.16	83.4	8.74	.22	83.1	8.57	.44	74.0	7.39	.61	66.3	5.82	.11	66.7	7.07	.26
5000	76.3	8.01	.15	77.8	8.62	.49	78.0	8.50	.51	69.4	7.54	.49	59.9	5.93	.16	57.6	6.04	.15
OASPL	100.5	5.53	.13	101.8	6.43	.34	101.9	6.74	.40	96.2	6.24	.25	100.8	6.89	.11	101.6	7.49	.14

RUNS 717- 724, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.4	7.45	.25	94.7	7.39	.13	97.2	6.90	.20	101.4	7.56	.59	102.0	7.80	.07
630	87.4	7.73	.12	93.0	7.93	.25	95.2	7.67	.07	98.0	8.24	.33	98.4	8.51	.21
1250	81.7	8.31	.41	86.3	8.69	.49	88.4	8.74	.31	91.9	9.39	.16	92.3	9.36	.15
2500	73.5	8.13	.38	79.4	8.46	.30	83.0	8.44	.14	85.7	8.96	.06	86.2	9.13	.39
5000	64.0	6.24	.43	71.5	6.79	.26	73.4	6.35	.38	77.4	7.06	.10	80.0	7.71	.31
OASPL	102.8	6.32	.09	106.4	6.42	.09	108.3	6.16	.03	110.3	6.57	.24	110.4	6.81	.06

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	100.8	6.78	.09	101.4	6.94	.33	99.4	6.55	.55	90.9	5.93	.32	87.9	7.07	.39	77.2	5.08	.48
630	96.6	7.66	.06	95.4	7.67	.54	93.8	7.36	.45	87.9	6.95	.24	84.0	6.96	.55	71.8	5.07	.43
1250	90.5	8.70	.14	90.2	8.57	.24	90.0	8.37	.64	85.8	7.89	.19	81.5	7.57	.42	67.0	5.67	.69
2500	85.8	8.51	.11	85.2	8.27	.45	86.0	8.42	.39	82.0	7.86	.31	77.0	7.78	.80	58.9	5.77	.88
5000	78.9	6.86	.26	78.7	7.06	.13	80.5	7.60	.37	76.8	7.56	.25	70.7	7.49	.85	49.5	4.58	.86
OASPL	109.8	5.23	.02	109.3	6.30	.44	108.1	6.00	.48	104.1	6.06	.25	103.1	7.38	.52	98.1	5.66	.39

RUNS 717- 724, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.8	7.19	.21	87.8	7.01	.26	90.9	6.69	.16	91.6	6.77	.10	90.4	6.68	.13
630	79.1	6.99	.51	85.2	7.61	.35	87.4	7.42	.09	87.6	7.31	.40	86.5	7.06	.51
1250	73.4	7.23	.58	80.3	8.12	.57	83.5	8.39	.40	87.5	9.36	.32	86.2	8.86	.47
2500	66.6	7.34	.53	74.5	8.20	.45	78.8	8.07	.32	81.9	9.07	.30	81.0	8.82	.60
5000	56.7	5.70	.56	66.2	6.34	.60	69.5	6.46	.42	74.9	8.28	.42	76.7	8.81	.66
OASPL	96.2	5.96	.41	100.1	6.10	.34	101.9	5.91	.11	102.4	6.10	.26	101.3	6.03	.35

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.9	6.62	.12	92.0	7.36	.60	90.3	6.95	.21	80.2	4.71	.12	83.0	5.41	1.02	88.2	7.04	.17
630	87.4	7.34	.35	87.8	7.35	.73	87.3	7.37	.48	78.1	5.30	.20	78.2	6.29	.76	81.9	7.49	.08
1250	86.1	8.47	.15	87.4	8.55	.10	87.8	8.90	.19	76.9	6.71	.15	74.0	7.03	.63	74.3	7.48	.22
2500	81.8	8.36	.16	83.6	8.80	.43	82.8	8.34	.47	73.4	6.81	.10	67.4	6.59	.82	66.5	6.98	.34
5000	77.0	7.93	.14	78.1	8.48	.48	78.1	8.44	.14	68.0	6.57	.33	59.9	6.05	.93	56.8	5.75	.64
OASPL	100.7	5.78	.24	102.6	6.80	.43	101.7	6.70	.28	96.7	5.70	.11	100.4	6.86	.48	101.0	7.33	.22

TABLE A-II.- CONTINUED.

RUNS 725- 732, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.7	7.41	.33	98.6	7.07	.32	98.5	6.64	.06	101.7	7.08	.46	101.9	7.42	.44
630	87.5	7.51	.26	94.2	8.15	.31	95.1	7.59	.18	97.6	8.18	.46	96.4	8.09	.13
1250	81.1	7.98	.45	87.1	8.64	.36	87.8	7.99	.33	92.0	9.30	.27	91.2	8.84	.19
2500	74.2	8.21	.34	81.0	8.88	.33	83.9	8.64	.24	86.4	9.13	.38	86.5	9.19	.20
5000	65.1	7.27	.41	74.2	9.00	.46	75.9	7.67	.37	80.2	9.60	.31	81.8	8.61	.49
OASPL	104.1	6.26	.31	108.6	6.73	.34	108.8	5.91	.03	110.4	6.34	.34	109.5	6.42	.22

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.6	5.91	.29	95.7	5.40	.23	94.6	6.22	.15				85.1	5.87	.14	91.8	7.30	.21
630	93.1	6.92	.11	91.3	6.91	.40	91.7	7.28	.09				80.2	6.02	.23	85.4	7.35	.08
1250	89.5	8.10	.12	89.4	7.99	.46	89.9	8.20	.27				78.3	7.10	.28	79.3	7.45	.05
2500	85.6	8.11	.27	84.8	7.82	.22	87.0	8.43	.19				71.8	7.22	.27	72.7	7.76	.12
5000	81.0	7.84	.18	80.0	7.59	.42	82.7	8.27	.27				65.4	6.94	.30	64.3	7.21	.22
OASPL	108.4	5.79	.07	106.5	5.58	.41	107.5	6.49	.13				102.8	6.68	.13	104.1	7.24	.07

RUNS 725- 732, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.5	7.56	.10	91.1	7.31	.27	91.4	6.38	.97	90.8	6.93	.49	90.6	7.02	.37
630	79.9	7.09	.58	86.2	7.34	.25	87.9	7.38	.90	87.4	7.87	.25	86.9	7.17	.46
1250	74.1	7.32	.78	81.7	8.32	.39	83.3	8.01	.63	87.1	8.97	.44	86.0	8.22	.33
2500	67.3	7.62	.67	76.1	8.60	.41	79.0	8.00	.31	81.7	8.74	.22	80.8	8.38	.52
5000	59.1	7.11	.76	68.9	7.68	.36	71.9	7.63	.17	76.2	8.66	.32	77.1	8.67	.41
OASPL	98.2	6.01	.30	102.2	6.14	.32	102.4	5.74	.48	102.0	6.07	.31	101.9	6.25	.33

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	88.4	6.23	.15	89.8	7.08	.28	89.8	7.29	.25	86.6	6.26	.37	93.8	7.86	.31	90.0	7.76	.12
630	85.4	6.61	.19	88.5	7.49	.66	86.9	6.85	.44	79.9	5.80	.26	86.4	7.41	.22	85.5	8.18	.05
1250	85.6	8.24	.13	88.7	8.82	.62	86.5	7.73	.12	78.7	7.03	.45	81.4	7.62	.23	79.2	8.37	.10
2500	81.5	8.18	.34	83.7	8.44	.37	82.2	7.54	.24	74.9	7.09	.55	76.0	7.61	.36	72.7	8.19	.22
5000	77.5	8.07	.17	78.0	8.06	.86	77.6	7.72	.37	70.5	7.20	.57	70.1	7.71	.42	64.0	7.91	.38
OASPL	100.5	5.85	.08	101.8	6.78	.33	102.1	7.07	.18	101.6	6.90	.17	104.6	7.45	.31	100.9	6.85	.10

RUNS 733- 740, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.7	6.97	.39	92.1	8.06	.48	93.6	7.46	.15	96.6	6.43	.22	97.0	6.97	.45
630	81.7	7.14	.13	88.6	8.43	.10	90.8	8.26	.19	92.6	7.46	.06	93.4	8.21	.10
1250	77.2	7.72	.20	83.1	9.34	.12	85.1	8.85	.18	87.1	8.58	.11	88.3	8.86	.13
2500	70.2	7.70	.13	78.1	9.76	.20	81.1	9.05	.17	82.4	8.25	.31	84.1	9.58	.12
5000	62.1	7.23	.14	72.2	9.60	.24	74.0	8.61	.30	76.5	7.89	.11	79.3	9.21	.17
OASPL	98.6	5.08	.24	103.6	8.54	.15	105.4	5.82	.04	106.2	5.27	.10	107.0	6.38	.18

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.6	6.72	.17	97.4	6.08	.38	96.2	5.92	.30	92.3	8.29	.45	86.3	8.29	.22	77.9	6.33	.25
630	92.2	7.65	.32	91.8	7.40	.32	90.5	7.24	.25	87.1	8.18	.14	84.3	9.26	.26	72.0	6.67	.23
1250	87.3	8.93	.30	87.0	8.16	.58	87.4	8.20	.35	83.9	8.66	.05	80.8	9.38	.44	66.9	6.91	.15
2500	84.7	9.50	.32	83.9	8.43	.42	84.2	8.24	.29	80.8	8.42	.09	77.4	9.69	.24	61.5	7.24	.25
5000	79.9	8.92	.42	79.2	8.22	.50	79.5	8.05	.29	76.9	8.72	.12	72.5	9.85	.42	53.9	7.39	.60
OASPL	106.5	5.77	.17	106.0	5.38	.35	105.8	5.80	.12	105.0	8.02	.41	102.6	8.36	.09	94.4	5.66	.38

RUNS 733- 740, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.2	8.25	.11	86.3	8.26	.29	87.6	7.44	.15	91.0	6.71	.17	91.4	7.79	.28
630	78.0	8.57	.16	82.9	8.48	.46	84.7	8.30	.33	86.8	7.93	.05	88.0	8.48	.46
1250	71.7	8.24	.12	78.6	9.35	.26	81.6	9.41	.18	84.1	8.55	.09	85.3	9.62	.37
2500	65.8	9.02	.19	73.3	9.52	.49	78.1	9.44	.37	80.7	9.32	.19	81.1	10.*	.39
5000	58.1	8.73	.36	67.0	8.95	.49	70.3	8.84	.19	74.4	8.51	.15	76.9	10.*	.45
OASPL	95.3	6.10	.04	98.8	6.42	.23	100.5	5.74	.11	102.0	5.83	.05	102.8	6.95	.22

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.3	7.18	.68	87.5	6.18	.04	88.8	7.60	.21	83.3	6.90	.27	80.3	6.44	.27	85.8	8.30	.44
630	86.6	8.21	.56	84.8	6.81	.21	83.6	7.23	.19	81.4	7.29	.19	76.2	7.76	.37	79.1	8.24	.63
1250	83.4	9.07	.29	83.0	8.11	.11	81.6	8.35	.21	77.9	7.30	.14	72.2	8.34	.28	71.5	8.02	.43
2500	81.3	9.62	.37	80.3	8.01	.18	79.8	8.66	.22	75.4	7.91	.15	67.8	8.18	.30	66.3	8.71	.64
5000	77.1	9.11	.29	76.1	8.32	.18	75.4	8.91	.06	70.6	7.61	.24	62.4	8.26	.29	58.1	8.28	.69
OASPL	101.0	6.52	.30	99.7	5.88	.07	100.3	7.41	.14	98.3	7.59	.23	97.9	7.12	.34	99.1	7.86	.30

TABLE A-II.- CONTINUED.

RUNS 741- 748, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.7	7.10	.32	91.5	7.04	.23	93.3	7.07	.23	96.2	6.62	.21	97.2	7.82	.42
630	81.8	7.35	.13	88.4	8.54	.16	90.3	7.43	.16	92.8	7.84	.12	93.0	8.29	.48
1250	77.8	8.21	.04	83.1	9.48	.09	85.6	9.52	.09	87.5	9.16	.02	88.0	9.12	.26
2500	71.2	8.49	.19	78.1	9.87	.11	81.5	9.16	.37	83.0	8.98	.14	83.9	9.74	.31
5000	63.2	8.93	.21	72.4	8.91	.06	74.7	8.54	.41	77.3	7.89	.11	79.8	9.32	.38
OASPL	98.4	5.47	.24	103.2	6.77	.17	104.9	6.07	.07	105.8	5.66	.18	106.4	6.59	.28

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	97.0	7.27	.13	96.8	5.88	.57	96.3	6.43	.22	91.5	8.09	.14	88.6	8.21	.10	76.9	6.03	.49
630	92.7	8.72	.11	91.3	7.24	.14	91.0	8.00	.23	86.9	8.45	.27	83.2	8.38	.18	71.8	7.36	.41
1250	87.6	9.37	.13	87.0	8.36	.28	87.4	8.74	.19	83.9	9.08	.23	79.5	8.51	.22	66.6	7.88	.29
2500	84.8	9.51	.19	84.2	8.79	.10	84.5	8.46	.18	81.2	8.88	.22	76.0	8.69	.35	61.6	7.99	.81
5000	80.3	8.70	.23	79.1	7.99	.38	80.3	8.60	.20	76.9	9.02	.29	71.2	8.80	.23	53.9	7.87	1.05
OASPL	106.1	8.22	.08	108.6	5.41	.19	105.9	6.30	.09	104.7	8.02	.28	101.9	7.82	.07	94.3	6.87	.28

RUNS 741- 748, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.2	7.26	.07	85.4	7.84	.31	87.8	7.64	.31	89.3	6.28	.41	88.8	6.30	1.03
630	77.2	8.16	.04	82.7	8.69	.22	85.0	8.47	.02	85.9	7.69	.41	85.7	6.88	1.01
1250	72.3	8.94	.17	78.5	9.25	.39	81.1	9.02	.29	83.2	8.16	.41	83.1	8.06	.68
2500	65.9	8.87	.13	73.5	9.37	.55	78.0	9.35	.24	79.7	8.39	.09	79.3	8.85	.56
5000	58.0	7.59	.10	67.8	8.53	.40	70.8	8.26	.27	74.5	8.11	.11	75.2	8.31	.96
OASPL	94.7	6.10	.21	98.3	6.49	.26	99.8	5.91	.23	101.1	5.71	.11	100.4	5.70	.60

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.2	7.69	.52	89.1	6.81	.51	88.6	7.60	.18	83.6	7.27	.41	79.3	6.36	.51	85.9	8.65	.27
630	87.6	8.48	.50	85.8	7.43	.35	84.3	7.65	.12	81.4	7.74	.42	75.4	7.74	.44	78.8	8.58	.66
1250	84.1	9.27	.22	83.6	8.46	.15	82.0	7.81	.42	78.5	8.20	.56	71.5	8.07	.68	71.4	8.72	.82
2500	81.6	9.45	.25	81.0	8.45	.14	80.5	8.79	.32	75.7	7.98	.37	67.5	8.32	.53	68.7	8.87	.58
5000	77.5	8.95	.25	76.9	8.54	.04	75.6	8.94	.36	70.7	7.98	.37	61.8	7.96	.76	57.8	8.36	.62
OASPL	101.1	6.64	.40	100.4	6.37	.20	100.2	7.93	.13	98.3	7.61	.30	97.0	6.93	.49	98.6	7.75	.22

RUNS 757- 764, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	86.7	8.72	.21	93.3	7.76	.36	94.9	6.94	.20	97.9	6.27	.16	95.7	7.28	.27
630	83.7	7.04	.15	90.3	8.32	.32	92.5	7.96	.06	94.0	7.04	.15	92.0	7.98	.32
1250	79.1	8.31	.13	84.6	9.71	.28	86.2	9.32	.19	87.8	8.74	.08	86.7	10.*	.31
2500	71.9	8.24	.15	79.6	10.*	.16	82.4	9.48	.16	83.9	9.12	.16	82.4	10.*	.23
5000	63.4	8.93	.21	72.9	8.91	.06	74.1	7.99	.27	77.3	7.84	.13	77.5	9.33	.13
OASPL	98.9	5.03	.12	104.5	6.65	.23	106.1	5.98	.04	107.0	5.49	.20	105.4	6.70	.26

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	98.5	8.68	.16	98.5	5.96	.35	96.2	5.31	.38	91.2	7.63	.43	85.8	7.63	.08	78.1	8.98	.43
630	93.6	7.63	.08	92.3	7.00	.45	91.0	7.14	.13	87.4	8.36	.27	83.0	8.15	.26	72.6	7.47	.37
1250	87.9	9.20	.11	87.8	8.40	.20	87.2	8.30	.47	83.9	8.65	.22	80.1	8.82	.17	67.1	7.48	.31
2500	85.2	9.45	.25	84.9	8.92	.38	84.8	8.81	.39	82.1	9.06	.38	76.5	9.01	.41	61.9	8.50	.32
5000	80.6	8.88	.18	79.5	8.16	.33	79.8	8.10	.35	76.6	8.28	.30	70.7	8.67	.43	54.0	8.25	.80
OASPL	107.2	5.94	.16	106.5	5.40	.20	106.0	5.79	.16	105.0	8.03	.28	101.3	7.54	.10	94.3	6.10	.40

RUNS 757- 764, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	82.9	7.88	.24	86.8	7.95	.18	88.6	7.13	.23	90.0	6.20	.29	88.6	7.94	.42
630	79.0	8.11	.33	84.6	8.87	.38	85.7	8.26	.27	86.7	7.38	.19	85.5	8.76	.20
1250	73.4	8.97	.23	80.4	9.41	.18	82.8	9.44	.37	83.9	8.55	.09	82.8	9.93	.13
2500	66.3	8.58	.08	75.8	10.*	.40	79.8	9.96	.32	81.2	9.59	.10	79.0	10.*	.40
5000	58.2	7.74	.20	68.4	8.81	.53	71.4	8.49	.34	74.8	8.40	.04	74.2	9.88	.31
OASPL	95.1	6.01	.18	99.1	6.33	.15	100.6	5.78	.18	101.7	5.87	.19	100.4	7.04	.19

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	90.5	7.38	.05	91.5	6.95	.14	91.3	7.75	.26	85.7	7.29	.16	82.6	8.34	.28	85.3	8.09	.37
630	87.5	7.81	.05	87.6	7.61	.12	87.4	8.30	.28	84.2	7.85	.18	77.8	8.27	.22	78.2	7.97	.56
1250	83.8	8.69	.22	84.9	8.93	.14	85.8	9.59	.25	82.2	8.94	.15	75.0	9.58	.12	71.7	8.33	.25
2500	81.8	9.42	.25	82.1	8.70	.15	83.7	10.*	.13	80.2	9.34	.13	69.2	9.30	.30	66.1	9.00	.41
5000	77.3	8.78	.34	77.1	8.46	.13	78.9	10.*	.13	75.0	8.82	.05	62.3	8.88	.35	57.6	8.28	.40
OASPL	101.8	6.38	.09	101.5	6.15	.05	102.3	7.64	.20	99.8	7.80	.20	97.0	7.04	.12	98.2	7.88	.17

TABLE A-II.- CONTINUED.

RUNS 765- 776, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.4	7.62	.35	93.3	7.82	.23	95.4	7.16	.20	98.7	7.09	.41	96.5	7.48	.15
630	84.2	7.70	.21	89.9	7.99	.28	92.1	7.67	.19	94.8	8.16	.43	92.5	8.25	.14
1250	78.8	8.40	.30	83.9	8.90	.39	86.4	9.19	.21	88.2	9.21	.20	86.5	9.53	.37
2500	72.1	8.76	.31	78.5	9.36	.55	82.1	9.16	.53	84.1	9.53	.12	82.0	9.69	.61
5000	62.3	7.73	.26	71.5	8.47	.63	73.8	8.27	.42	77.3	8.86	.27	76.9	9.09	.50
OASPL	100.1	5.90	.27	104.8	6.39	.20	106.6	5.99	.16	108.1	6.21	.35	105.7	6.44	.17

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	98.8	6.81	.39	99.1	6.53	.46	97.5	6.45	.29	91.2	7.06	.43	85.8	7.37	.53	78.4	6.65	.72
630	94.0	7.75	.30	92.7	7.33	.44	91.7	7.63	.26	87.1	7.72	.19	83.0	7.59	.79	72.4	7.01	.42
1250	87.5	8.65	.27	88.1	8.69	.28	87.8	8.85	.15	84.0	8.44	.12	80.6	8.57	.81	67.1	7.13	.58
2500	84.8	8.94	.29	85.2	8.98	.21	85.3	9.12	.20	81.8	8.77	.26	76.3	8.51	.77	61.2	7.42	.71
5000	79.8	8.53	.37	79.7	8.83	.21	80.0	8.83	.15	76.9	8.55	.35	71.0	8.48	.72	52.8	7.10	.82
OASPL	107.8	5.97	.26	107.2	5.79	.39	106.7	6.15	.10	104.5	7.07	.54	101.6	7.43	.47	94.8	6.26	.37

RUNS 765- 776, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	82.7	7.55	.16	86.3	7.28	.42	88.5	6.93	.12	91.4	7.17	.35	88.6	7.20	.39
630	78.4	7.45	.23	84.0	7.81	.43	85.5	7.63	.40	86.8	7.87	.21	85.1	7.91	.33
1250	72.6	7.85	.64	79.9	8.60	.50	82.2	8.55	.33	84.5	8.89	.19	82.2	8.97	.39
2500	66.0	8.31	.58	74.1	8.93	.59	79.1	9.21	.61	80.9	9.32	.32	78.2	9.28	.57
5000	56.5	7.48	.59	66.9	8.05	.75	70.4	8.18	.68	74.6	8.86	.27	73.6	9.11	.61
OASPL	95.6	5.76	.14	99.0	5.57	.41	101.4	5.79	.11	102.5	6.06	.28	100.5	6.37	.33

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	90.7	6.88	.14	91.8	7.28	.23	91.3	7.53	.32	83.6	6.22	.96	79.9	6.29	.26	87.0	8.33	.23
630	87.4	7.61	.37	87.4	7.65	.31	87.5	8.22	.25	81.8	6.63	1.35	75.3	6.41	.37	79.7	7.96	.37
1250	83.7	8.48	.18	84.9	8.81	.24	85.5	9.16	.33	79.4	7.48	1.56	71.7	7.29	.29	72.8	8.29	.28
2500	81.6	9.02	.43	82.4	9.20	.22	83.3	9.50	.29	77.7	7.89	1.57	66.7	7.56	.44	66.5	8.24	.36
5000	77.1	8.71	.26	77.7	9.23	.22	78.3	9.41	.39	72.2	7.55	1.37	59.6	7.12	.55	58.1	8.14	.36
OASPL	101.9	6.06	.14	102.1	6.40	.20	101.8	6.86	.30	97.7	6.37	.48	96.5	6.65	.20	99.2	7.79	.33

RUNS 777- 780, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	87.5	7.01	.37	93.0	7.31	.44	95.8	7.62	.13	97.5	6.18	.23	99.6	7.47	.25
630	84.5	7.29	.26	89.0	7.44	.37	92.2	7.85	.25	94.0	7.12	.23	95.3	7.97	.31
1250	79.1	8.54	.04	83.4	8.59	.17	86.6	9.86	.06	87.6	8.73	.21	89.4	10.*	.10
2500	72.5	9.06	.17	77.9	9.34	.22	82.6	10.*	.28	83.3	9.61	.37	85.8	10.*	.11
5000	62.9	8.20	.23	70.3	8.54	.24	74.1	9.06	.49	76.0	8.80	.41	79.6	10.*	.18
OASPL	100.0	5.35	.20	103.9	5.62	.15	106.7	6.24	.23	107.0	5.39	.26	108.4	6.73	.21

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	98.3	7.11	.10	98.8	6.40	.29	97.0	5.82	.33	92.3	8.25	.39	86.6	8.22	.25	78.0	6.25	.69
630	93.8	7.92	.13	92.3	8.84	.43	90.5	6.75	.33	87.8	8.17	.28	83.9	8.80	.38	72.3	6.87	.76
1250	88.1	9.74	.28	88.0	8.93	.38	87.1	8.16	.46	84.5	9.01	.20	81.6	9.85	.50	68.0	7.62	.67
2500	85.1	10.*	.27	84.8	9.28	.54	84.6	8.68	.51	82.7	9.56	.02	77.3	9.57	.25	62.1	8.85	.82
5000	79.2	9.22	.36	78.7	9.08	.64	79.9	8.59	.40	77.0	9.27	.22	71.2	9.60	.24	53.7	8.74	.83
OASPL	107.5	6.21	.17	106.9	5.71	.28	106.0	5.68	.31	105.5	8.34	.42	102.4	8.46	.32	94.8	6.09	.42

RUNS 781- 788, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	90.0	7.11	.25	95.6	6.71	.10	97.3	6.80	.09	98.3	5.77	.18	99.3	6.17	.28
630	85.4	6.89	.14	90.7	7.31	.06	94.1	7.56	.12	93.6	6.71	.16	93.9	7.14	.10
1250	80.7	8.44	.11	86.5	9.08	.40	88.6	9.83	.63	88.6	8.77	.22	89.7	9.37	.13
2500	73.8	8.58	.11	79.9	9.26	.43	84.5	10.*	.58	84.4	9.23	.36	85.1	9.49	.14
5000	64.8	8.15	.15	72.4	8.55	.47	76.1	9.13	.54	76.7	8.30	.64	79.7	9.37	.12
OASPL	101.2	5.16	.19	105.5	5.72	.05	107.8	5.94	.17	107.2	5.16	.11	107.7	5.92	.15

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	97.1	6.07	.06	95.6	5.47	.14	93.8	6.13	.07	85.2	6.78	.41	87.0	6.63	.57	91.5	7.57	.57
630	91.4	7.23	.26	90.5	7.15	.29	89.2	7.30	.12	81.8	6.97	.41	81.0	6.34	.28	85.9	7.54	.50
1250	88.4	9.20	.43	87.4	8.04	.38	87.1	8.07	.26	79.4	7.63	.43	77.6	6.63	.40	79.3	8.13	.27
2500	85.2	9.14	.62	84.4	8.30	.64	85.1	8.53	.28	77.5	7.78	.94	72.2	7.69	.62	73.0	8.30	.56
5000	80.1	9.15	.49	78.5	8.33	.39	80.7	8.73	.31	72.1	7.72	1.00	64.6	7.63	.43	65.1	8.69	.40
OASPL	106.6	5.68	.23	105.7	5.51	.30	105.8	6.44	.23	99.9	6.54	.16	101.0	5.57	.24	103.4	7.56	.29

TABLE A-II.- CONTINUED.

RUNS 781- 788, MICROPHONES 30 DEGREES BELOW WINGTIP-

FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	85.6	8.11	.54	89.7	8.13	.23	91.8	7.07	.18	93.0	6.45	.34	93.2	7.80	.22			
630	81.7	7.92	.38	86.9	8.32	.32	87.9	8.04	.09	88.9	7.51	.14	90.3	8.86	.19			
1250	76.4	9.72	.28	82.0	9.38	.06	84.6	9.44	.37	86.1	9.31	.06	87.2	10.*	.08			
2500	69.2	9.35	.19	76.3	10.*	.39	80.8	10.*	.39	82.0	9.48	.07	83.1	10.*	.16			
5000	60.6	9.47	.41	69.2	9.92	.26	72.8	9.17	.23	74.6	9.21	.08	78.1	10.*	.16			
OASPL	97.6	6.07	.22	101.1	6.32	.21	102.8	6.29	.18	103.4	6.94	.17	104.2	7.13	.20			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.5	7.06	.02	91.9	8.84	.06	91.2	7.52	.25	81.0	5.12	.47	90.1	8.88	.30	90.9	9.03	.20
630	87.7	8.07	.26	88.1	7.83	.14	88.5	8.69	.42	78.9	5.78	.64	83.9	7.86	.10	85.3	8.94	.25
1250	84.6	9.22	.17	85.8	9.01	.05	86.5	9.46	.33	76.2	6.07	1.01	78.7	8.90	.20	78.8	9.07	.29
2500	82.5	9.84	.13	83.1	9.48	.07	85.1	10.*	.15	73.9	6.05	1.32	74.1	8.84	.22	73.0	9.78	.28
5000	77.5	9.49	.30	77.3	8.47	.27	80.1	10.*	.33	66.0	5.28	1.84	66.3	8.80	.20	64.0	9.77	.43
OASPL	102.5	8.64	.19	103.1	7.08	.11	102.9	7.56	.09	97.2	6.21	.62	102.0	7.95	.20	102.2	8.34	.19

RUNS 789- 796, MICROPHONES 90 DEGREES BELOW WINGTIP-

FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	88.6	7.34	.10	94.5	7.60	.42	96.0	6.82	.12	100.2	7.07	.45	101.2	7.60	.08			
630	85.5	7.55	.24	90.6	7.55	.24	93.9	7.95	.09	96.7	8.25	.06	96.8	8.18	.28			
1250	79.7	8.12	.63	84.3	8.36	.28	87.1	8.70	.37	90.0	8.83	.14	90.9	9.08	.16			
2500	72.6	8.32	.60	78.3	8.70	.37	82.2	8.53	.29	84.6	8.80	.15	85.8	9.04	.40			
5000	63.3	7.42	.36	70.7	7.78	.36	74.0	7.63	.14	78.2	8.48	.26	80.8	8.64	.36			
OASPL	101.9	6.10	.28	105.7	6.28	.21	107.6	5.97	.09	109.9	6.46	.29	109.8	6.83	.16			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	99.4	6.38	.33	100.0	6.39	.49	99.0	6.86	.25	91.7	6.44	.23	86.7	6.77	.80			
630	95.0	7.57	.13	94.8	7.86	.38	93.5	7.62	.22	88.2	7.04	.32	83.9	7.18	.77			
1250	89.4	8.52	.02	90.3	8.82	.49	91.5	9.18	.13	86.4	8.17	.07	81.0	7.98	.86			
2500	84.9	8.18	.27	85.6	8.40	.31	87.5	8.89	.21	83.5	8.09	.19	77.3	8.09	.94			
5000	80.0	7.88	.10	80.4	8.27	.45	83.3	8.87	.31	77.9	7.91	.12	70.8	7.87	.73			
OASPL	105.7	5.96	.02	108.3	5.89	.46	108.3	6.15	.15	104.8	6.27	.31	104.0	7.83	.80			

RUNS 789- 796, MICROPHONES 30 DEGREES BELOW WINGTIP-

FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	83.2	7.01	.26	86.6	6.97	.32	89.2	6.78	.15	93.1	7.35	.04	91.9	6.94	.33			
630	79.4	7.08	.64	84.4	7.34	.53	85.1	6.92	.10	88.1	7.73	.12	89.2	7.74	.49			
1250	72.1	7.07	.82	79.7	8.06	.44	82.4	8.03	.38	85.8	8.51	.11	86.9	8.64	.38			
2500	65.4	7.47	.66	73.1	8.06	.44	78.6	8.30	.21	81.8	8.81	.12	81.1	8.42	.48			
5000	56.8	6.95	.88	65.8	7.31	.46	70.1	7.41	.22	75.7	8.53	.24	77.2	8.60	.41			
OASPL	96.7	5.87	.25	99.8	5.67	.31	101.8	5.62	.13	104.2	6.27	.12	103.8	6.13	.43			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.5	6.74	.12	93.1	7.01	.23	93.2	7.33	.23	88.2	6.94	.25	79.0	5.61	.19	87.4	7.35	.27
630	87.9	7.16	.14	89.6	7.37	.13	88.6	7.29	.25	85.0	6.63	.31	74.3	5.88	.27	81.0	7.33	.16
1250	85.3	8.14	.04	87.9	8.77	.32	88.1	8.80	.15	85.5	8.11	.27	71.2	6.81	.38	72.6	7.05	.30
2500	81.8	8.16	.20	83.9	8.75	.26	85.5	8.91	.11	81.2	7.80	.30	64.1	6.37	.48	66.1	7.27	.17
5000	77.2	8.06	.21	78.8	8.84	.40	80.5	8.84	.19	75.5	7.57	.34	56.5	5.46	.27	56.1	6.81	.15
OASPL	102.6	5.00	.09	104.0	6.51	.09	103.7	6.75	.18	100.8	6.69	.12	97.3	6.94	.17	98.8	7.24	.07

RUNS 797- 800, MICROPHONES 90 DEGREES BELOW WINGTIP-

FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	89.4	7.81	.27	.2	-2.*	8.90	96.7	6.92	.11	100.0	7.41	.63	101.2	7.64	.40			
630	84.6	7.35	.43	.2	-2.*	8.66	93.6	7.84	.09	97.4	8.61	.13	97.5	8.84	.17			
1250	79.5	8.20	.49	.2	-2.*	8.43	86.6	8.66	.43	90.5	9.12	.22	91.2	9.19	.20			
2500	71.8	8.32	.66	.2	-2.*	7.97	82.2	8.83	.50	85.0	9.27	.15	85.8	9.28	.27			
5000	61.2	7.58	.55	.1	-1.*	6.23	72.9	7.71	.31	77.3	8.91	.23	79.2	8.94	.42			
OASPL	102.3	6.58	.32	.3	-4.*	13.*	107.5	6.06	.03	109.8	6.55	.30	110.1	6.80	.30			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	99.6	6.65	.19	100.9	7.17	.27	98.9	6.53	.31	92.3	6.53	.25	86.7	6.82	.44			
630	95.2	7.65	.26	98.0	7.84	.29	94.0	7.62	.18	88.3	7.19	.17	84.5	7.55	.98			
1250	90.1	8.91	.11	90.7	8.93	.48	91.4	9.22	.23	87.0	8.44	.30	80.2	7.83	.84			
2500	85.7	8.71	.11	88.6	8.88	.30	87.5	9.14	.06	83.1	8.16	.34	76.9	8.11	.70			
5000	79.5	8.26	.15	79.2	8.54	.44	81.7	8.91	.23	77.5	8.23	.15	70.8	8.12	.57			
OASPL	108.6	6.04	.08	109.2	8.46	.33	108.3	6.25	.24	104.7	6.33	.14	103.7	7.56	.68			

TABLE A-II.- CONTINUED.

RUNS 801- 808, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	88.2	7.17	.08				96.4	6.70	.08	98.8	6.83	.11	99.7	7.17	.42			
630	84.6	7.25	.41				93.0	7.31	.21	96.8	8.19	.18	96.5	8.01	.47			
1250	79.5	7.98	.45				86.7	8.40	.31	90.4	8.97	.21	90.7	8.88	.42			
2500	71.6	7.72	.37				81.9	8.22	.53	84.4	8.59	.20	85.1	8.81	.80			
5000	61.6	6.29	.39				72.2	6.36	.38	75.6	7.33	.07	78.4	7.74	.53			
OASPL	100.7	5.98	.35				106.6	5.75	.09	108.8	6.23	.15	109.1	6.46	.26			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	99.2	6.47	.13	100.4	6.83	.11	98.5	6.46	.31	90.9	5.98	.34	87.4	7.00	.38	.0	.00	.00
630	94.3	7.33	.23	94.6	7.53	.18	93.3	7.40	.12	87.6	6.86	.20	83.9	7.08	.70	.0	.00	.00
1250	89.5	8.52	.02	90.7	8.80	.17	90.0	8.56	.14	85.9	7.95	.26	80.2	7.80	.41	.0	.00	.00
2500	85.2	8.10	.47	85.7	8.89	.20	86.4	8.44	.24	82.3	7.79	.22	76.1	7.44	.60	.0	.00	.00
5000	78.3	6.98	.46	79.3	7.97	.28	80.7	8.05	.22	77.0	7.77	.38	70.2	7.83	.79	.0	.00	.00
OASPL	108.2	5.83	.11	108.5	6.17	.15	107.8	6.09	.17	103.9	5.97	.29	103.4	7.34	.73	.0	.00	.00

RUNS 801- 808, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	83.5	7.14	.39	87.1	6.95	.57	88.3	6.36	.24	91.8	7.31	.21	91.1	6.83	.31			
630	78.0	6.58	.67	85.0	7.60	.48	85.7	7.22	.10	88.4	7.71	.44	88.7	7.60	.41			
1250	72.1	6.97	.45	79.5	7.86	.74	82.7	8.23	.34	85.9	8.59	.59	86.8	8.88	.84			
2500	65.1	7.25	.77	73.1	7.82	.80	77.9	7.96	.64	81.5	8.85	.33	81.1	8.86	.54			
5000	54.8	5.77	1.00	64.9	6.37	.66	69.3	6.72	.50	73.1	7.84	.54	74.5	7.83	.68			
OASPL	95.8	5.79	.29	99.9	5.91	.32	101.0	5.55	.18	103.1	6.12	.25	102.7	5.98	.38			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.3	6.66	.07	93.3	7.40	.26	92.1	7.26	.31	88.0	6.69	.16	79.0	5.60	.32	86.4	7.36	.26
630	88.8	7.25	.16	88.6	7.36	.36	88.5	7.24	.35	85.7	6.85	.32	76.4	6.38	.58	78.9	6.79	.29
1250	85.6	8.12	.14	87.4	8.79	.47	88.2	8.88	.27	84.7	7.91	.37	73.1	7.43	.68	71.9	7.13	.22
2500	81.9	8.18	.21	83.0	8.81	.31	84.5	8.68	.20	80.5	7.63	.17	66.7	7.16	.79	64.3	6.73	.80
5000	76.3	7.60	.30	76.7	8.52	.46	79.3	8.96	.35	74.9	7.76	.12	58.1	6.16	.79	64.1	5.80	.52
OASPL	102.5	8.00	.18	103.2	8.56	.32	103.1	8.72	.31	100.7	6.67	.29	96.6	6.42	.34	97.0	6.05	.56

RUNS 809- 816, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	82.7	7.17	.46	.0	.00	.00	88.4	7.31	.29	90.8	7.75	.36	91.6	7.87	.15			
630	78.5	6.62	.61	.0	.00	.00	87.1	7.69	.50	89.8	8.00	.31	89.0	7.48	.05			
1250	75.3	7.03	.76	.0	.00	.00	84.3	8.19	.09	88.8	8.91	.19	89.1	8.62	.07			
2500	72.2	8.06	.44	.0	.00	.00	82.1	8.22	.16	84.6	8.74	.42	84.3	8.24	.16			
5000	63.1	6.83	.62	.0	.00	.00	74.7	7.25	.16	77.6	8.02	.50	77.8	7.41	.12			
OASPL	98.2	6.96	.34	.0	.00	.00	102.5	6.87	.15	104.4	7.41	.44	103.4	7.13	.14			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	93.0	8.02	.10	96.2	8.64	.36	95.4	8.90	.19	94.5	8.53	.23	86.4	7.53	.48	.0	.00	.00
630	90.7	7.82	.19	92.2	8.13	.38	92.1	7.93	.34	88.5	7.46	.30	81.1	6.92	.50	.0	.00	.00
1250	90.0	8.79	.07	91.2	9.12	.29	90.9	8.93	.35	86.7	8.26	.18	78.9	7.81	.29	.0	.00	.00
2500	86.6	8.40	.10	87.7	9.09	.22	88.2	8.94	.20	84.0	8.29	.16	75.7	7.86	.61	.0	.00	.00
5000	80.9	7.72	.12	81.4	8.54	.35	82.7	8.58	.19	77.6	7.87	.10	70.7	8.03	.38	.0	.00	.00
OASPL	104.5	7.38	.03	105.8	7.92	.22	106.1	7.89	.24	107.2	8.38	.12	106.5	8.31	.15	.0	.00	.00

RUNS 809- 816, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	77.3	6.88	.05	82.7	7.39	.18	84.9	7.32	.25	88.0	7.85	.24	88.0	7.89	.28			
630	72.3	5.72	.57	79.2	6.71	.32	82.6	7.21	.22	85.6	7.86	.74	86.1	7.60	.30			
1250	69.3	6.36	.61	75.8	7.24	.28	79.8	7.67	.31	84.7	8.60	.41	86.1	8.88	.18			
2500	65.5	7.07	.26	72.5	7.52	.42	77.6	7.89	.24	81.1	8.66	.54	80.9	8.38	.28			
5000	55.6	5.81	.33	66.1	6.72	.19	70.9	7.28	.16	74.4	8.33	.58	74.1	7.82	.18			
OASPL	93.2	6.45	.06	97.6	6.69	.11	99.3	6.80	.06	101.7	7.51	.28	101.1	7.23	.02			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.1	7.77	.38	91.5	8.32	.32	91.2	8.39	.40	86.2	6.94	.25	74.1	6.09	.47	79.8	7.07	.33
630	84.9	7.64	.24	87.5	7.65	.26	86.5	7.07	.39	84.1	6.67	.25	69.0	6.15	.54	71.1	5.48	.80
1250	85.5	8.27	.16	86.7	8.71	.15	86.2	8.48	.15	84.6	7.73	.31	67.5	6.18	.24	67.0	5.62	.80
2500	82.3	8.06	.04	82.7	8.61	.27	84.2	8.61	.32	80.4	7.63	.09	64.1	6.67	.46	63.4	6.38	.73
5000	77.3	7.89	.20	77.2	8.61	.27	77.6	8.19	.42	75.0	7.66	.10	56.4	5.98	.14	64.4	6.05	.40
OASPL	101.1	7.08	.03	102.4	7.74	.17	103.0	7.94	.39	101.5	7.70	.16	96.6	7.30	.20	98.2	7.96	.11

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE A-II.- CONTINUED.

Column headings for each microphone: SPL, 250 M/S; EXP. OF VJ; SCATTER. MID FREQ, 1/3 OCT.

RUNS 817- 824, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	83.7	7.08	.26	.0	.00	.00	88.8	7.11	.15	91.1	7.59	.48	91.7	7.56	.36
630	78.8	6.41	.60	.0	.00	.00	86.6	7.46	.30	89.3	7.81	.49	89.2	7.48	.36
1250	75.1	6.90	.63	.0	.00	.00	83.8	8.00	.19	88.0	8.50	.34	88.2	8.10	.21
2500	71.1	7.58	.60	.0	.00	.00	81.6	8.22	.16	84.3	8.71	.35	84.0	8.20	.04
5000	63.7	7.67	.48	.0	.00	.00	75.0	7.83	.07	77.8	8.57	.40	78.3	7.97	.10
OASPL	98.9	6.58	.10	.0	.00	.00	102.7	6.46	.10	104.6	7.12	.36	103.8	6.85	.01

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL	EXP.	SCATTER	MIKE 7, 97.5 DEG SPL	EXP.	SCATTER	MIKE 8, 105 DEG SPL	EXP.	SCATTER	MIKE 9, 120 DEG SPL	EXP.	SCATTER	MIKE 10, 135 DEG SPL	EXP.	SCATTER	MIKE 11, 150 DEG SPL	EXP.	SCATTER
315	91.8	7.24	.03	94.8	8.29	.57	95.6	8.60	.43	94.7	8.47	.15	87.2	7.48	.47	.0	.00	.00
630	90.2	7.56	.36	92.1	8.10	.47	92.4	8.10	.29	88.8	7.42	.27	81.6	6.90	.63	.0	.00	.00
1250	88.7	8.15	.15	90.9	8.88	.42	91.2	8.90	.32	85.3	7.52	.10	79.4	7.44	.60	.0	.00	.00
2500	86.0	8.09	.20	87.0	8.80	.43	88.2	8.81	.31	82.1	7.44	.11	76.3	7.77	.56	.0	.00	.00
5000	80.7	7.78	.35	81.7	8.88	.61	83.4	8.91	.51	77.6	7.86	.35	70.7	7.85	.43	.0	.00	.00
OASPL	104.1	6.86	.04	108.4	7.47	.40	106.1	7.66	.40	106.7	8.10	.12	105.4	8.23	.29	.0	.00	.00

RUNS 817- 824, MICROPHONES 30 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL	EXP.	SCATTER	MIKE 2, 45 DEG SPL	EXP.	SCATTER	MIKE 3, 60 DEG SPL	EXP.	SCATTER	MIKE 4, 75 DEG SPL	EXP.	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL	EXP.	SCATTER
315	78.6	6.94	.11	83.6	7.41	.13	85.2	7.21	.30	87.6	7.51	.29	88.6	7.08	.27
630	73.2	5.73	.46	80.4	6.75	.26	82.6	7.06	.34	86.0	7.67	.48	85.7	7.20	.37
1250	69.0	5.97	.52	75.6	7.02	.40	79.6	7.54	.22	84.6	8.47	.28	85.1	8.13	.13
2500	65.4	7.13	.34	73.1	7.80	.44	78.3	8.20	.28	80.9	8.53	.41	80.3	8.00	.14
5000	58.9	6.95	.39	66.0	7.12	.03	71.1	7.70	.06	73.6	8.24	.39	74.6	7.92	.26
OASPL	93.8	5.97	.05	98.2	8.28	.16	99.4	6.21	.19	101.8	7.07	.20	101.1	6.74	.11

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL	EXP.	SCATTER	MIKE 7, 97.5 DEG SPL	EXP.	SCATTER	MIKE 8, 105 DEG SPL	EXP.	SCATTER	MIKE 9, 120 DEG SPL	EXP.	SCATTER	MIKE 10, 135 DEG SPL	EXP.	SCATTER	MIKE 11, 150 DEG SPL	EXP.	SCATTER
315	89.6	7.67	.31	91.8	8.26	.26	91.4	8.27	.45	86.2	6.60	.30	76.0	6.61	.70	75.9	5.68	.18
630	87.0	7.52	.30	87.7	7.69	.29	87.3	7.35	.40	83.6	6.21	.29	70.9	6.08	.96	69.1	5.09	.10
1250	85.3	8.13	.13	86.6	8.58	.19	87.2	8.69	.17	83.6	7.25	.15	69.5	6.93	.96	65.3	5.82	.10
2500	82.0	7.96	.20	83.3	8.74	.38	83.3	8.29	.33	79.5	7.14	.22	66.4	7.08	.87	61.3	6.22	.16
5000	76.9	7.78	.26	77.2	8.59	.42	78.2	8.40	.28	74.5	7.37	.42	59.1	7.26	.79	52.6	6.19	.18
OASPL	101.7	6.98	.11	102.4	7.39	.26	102.5	7.49	.38	101.1	7.32	.25	97.3	7.38	.60	96.1	7.13	.24

RUNS 825- 832, MICROPHONES 90 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL	EXP.	SCATTER	MIKE 2, 45 DEG SPL	EXP.	SCATTER	MIKE 3, 60 DEG SPL	EXP.	SCATTER	MIKE 4, 75 DEG SPL	EXP.	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL	EXP.	SCATTER
315	91.2	7.44	.17				98.7	7.17	.08	99.6	6.88	.29	101.5	7.34	.10
630	88.4	7.35	.29				94.5	7.66	.06	96.2	7.89	.18	96.3	8.06	.29
1250	80.5	8.22	.24				87.5	8.46	.29	89.6	8.49	.38	91.8	9.01	.32
2500	73.5	8.23	.17				83.3	8.57	.23	85.2	8.82	.16	85.7	8.75	.32
5000	64.6	7.93	.34				74.7	7.61	.24	77.9	8.40	.14	80.5	8.92	.46
OASPL	102.5	6.11	.31				107.9	5.85	.08	109.3	6.19	.32	109.2	6.36	.22

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL	EXP.	SCATTER	MIKE 7, 97.5 DEG SPL	EXP.	SCATTER	MIKE 8, 105 DEG SPL	EXP.	SCATTER	MIKE 9, 120 DEG SPL	EXP.	SCATTER	MIKE 10, 135 DEG SPL	EXP.	SCATTER	MIKE 11, 150 DEG SPL	EXP.	SCATTER
315	98.2	6.22	.13	97.4	6.13	.27	93.8	6.19	.19	88.3	6.26	.22	83.2	5.44	.29	90.8	7.22	.10
630	93.0	7.17	.08	92.6	7.49	.17	90.4	7.08	.28	84.8	5.99	.71	77.9	5.51	.36	84.9	7.21	.10
1250	89.6	8.17	.04	90.3	8.37	.20	90.0	8.50	.32	84.0	7.19	.42	74.3	5.95	.20	77.7	6.82	.26
2500	86.0	8.27	.03	85.7	8.38	.13	86.4	8.27	.24	81.4	7.81	.63	68.6	6.05	.27	72.7	7.38	.29
5000	79.1	7.45	.23	80.3	8.42	.07	81.2	8.29	.35	75.6	7.52	.74	62.0	6.16	.65	62.6	6.73	.38
OASPL	107.6	5.80	.04	107.3	6.09	.23	106.6	6.28	.18	103.0	6.54	.28	100.2	5.94	.05	102.4	6.75	.08

RUNS 825- 832, MICROPHONES 30 DEGREES BELOW WINGTIP.

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL	EXP.	SCATTER	MIKE 2, 45 DEG SPL	EXP.	SCATTER	MIKE 3, 60 DEG SPL	EXP.	SCATTER	MIKE 4, 75 DEG SPL	EXP.	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL	EXP.	SCATTER
315	85.4	7.48	.34	89.9	7.38	.36	90.5	6.78	.11	93.8	7.23	.31	92.5	6.65	.68
630	80.8	7.10	.27	87.4	7.73	.12	86.7	6.90	.31	90.4	7.86	.41	89.6	7.27	.52
1250	74.0	7.33	.55	81.7	8.21	.34	83.0	7.86	.31	87.4	8.07	.29	86.9	8.37	.52
2500	68.6	7.99	.33	76.0	8.68	.39	79.2	8.23	.24	82.6	8.87	.49	82.2	8.85	.60
5000	58.3	7.23	.16	67.9	7.61	.24	70.9	7.48	.22	75.3	8.78	.41	76.3	8.58	.66
OASPL	97.8	5.97	.23	102.2	8.12	.15	102.5	5.70	.11	104.3	6.19	.33	103.9	6.11	.31

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL	EXP.	SCATTER	MIKE 7, 97.5 DEG SPL	EXP.	SCATTER	MIKE 8, 105 DEG SPL	EXP.	SCATTER	MIKE 9, 120 DEG SPL	EXP.	SCATTER	MIKE 10, 135 DEG SPL	EXP.	SCATTER	MIKE 11, 150 DEG SPL	EXP.	SCATTER
315	92.4	6.63	.17	94.7	8.08	.23	94.3	8.66	.36	81.3	5.39	.60	91.3	7.86	.74	90.0	7.76	.12
630	88.5	7.17	.07	88.7	7.37	.17	90.5	8.34	.14	78.2	5.33	.77	84.5	7.27	.52	83.5	7.44	.21
1250	85.9	8.07	.06	88.2	8.63	.25	90.2	9.74	.51	76.3	5.88	.90	80.7	7.99	.44	77.8	7.62	.09
2500	83.3	8.38	.09	83.5	8.51	.27	86.5	9.53	.14	71.3	5.42	.73	75.6	7.75	.40	72.0	7.81	.21
5000	77.6	8.06	.20	77.7	8.49	.39	81.3	9.60	.08	66.5	5.78	.92	66.7	7.38	.47	62.6	7.58	.25
OASPL	103.2	6.12	.06	105.0	7.39	.08	105.4	8.01	.18	98.7	6.44	.36	103.0	7.33	.60	101.0	7.04	.14

TABLE A-II.- CONTINUED.

RUNS 833- 840, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	87.2	7.78	.36				91.5	7.63	.17	94.5	8.23	.17	95.4	8.24	.39
630	82.2	7.20	.64				88.4	7.42	.41	92.1	8.23	.40	92.7	8.14	.32
1250	78.3	7.62	.57				86.1	8.01	.19	91.0	9.01	.32	91.4	8.83	.17
2500	75.7	8.55	.34				84.6	8.45	.15	86.8	8.79	.37	86.6	8.74	.42
5000	68.3	8.89	.36				77.0	7.95	.09	80.7	9.19	.20	81.1	8.72	.23
OASPL	101.7	8.73	.30				104.7	6.68	.10	106.8	7.43	.23	106.6	7.48	.42

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	97.3	8.78	.36	99.6	9.43	.25	98.5	8.96	.49	89.2	6.74	.12				85.6	7.62	.09
630	92.9	7.96	.37	93.7	8.35	.35	92.7	8.02	.42	83.6	5.92	.45				76.7	6.42	.30
1250	93.3	8.20	.15	91.6	8.79	.37	90.2	8.53	.27	84.3	7.51	.15				72.9	7.01	.08
2500	87.2	8.14	.38	87.1	8.63	.43	87.7	8.63	.25	81.1	7.31	.23				68.7	7.14	.22
5000	81.6	7.97	.25	81.8	8.63	.24	82.6	8.75	.32	76.0	7.45	.29				60.5	7.19	.17
OASPL	106.9	7.32	.31	109.1	8.28	.30	109.6	8.22	.34	106.6	7.54	.15				102.8	7.56	.03

RUNS 833- 840, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	81.8	7.66	.17	86.8	7.61	.35	87.7	7.41	.36	91.2	8.39	.37	92.4	8.82	.53
630	76.7	6.75	.74	82.8	7.15	.70	84.4	7.21	.30	89.0	8.50	.32	89.7	8.36	.68
1250	73.2	7.09	.58	78.7	7.60	.48	82.3	8.12	.40	87.4	9.10	.39	87.6	8.87	.38
2500	69.7	8.05	.57	75.8	8.07	.32	80.7	8.46	.23	83.5	9.00	.38	83.3	8.77	.48
5000	61.4	8.23	.52	71.0	8.72	.67	73.6	8.20	.04	77.2	9.10	.39	77.4	8.89	.54
OASPL	97.8	6.56	.05	101.8	6.56	.28	102.1	6.34	.07	104.3	7.25	.20	104.1	7.22	.34

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.4	8.12	.14	94.0	8.46	.48	93.4	8.46	.37	74.8	3.89	.66	90.0	9.07	.37	87.4	8.89	.12
630	88.5	7.63	.37	88.0	7.37	.58	88.9	7.71	.44	70.6	3.07	1.42	84.6	8.18	.70	81.0	7.82	.19
1250	86.5	8.16	.20	87.9	8.63	.25	88.5	8.75	.23	69.6	3.82	1.09	79.7	8.14	.38	76.3	7.80	.15
2500	83.0	7.99	.26	84.3	8.82	.44	85.6	8.76	.29	67.4	4.18	1.42	75.7	8.47	.30	72.1	7.07	.10
5000	78.1	7.93	.26	78.2	8.74	.38	80.1	8.87	.27	61.8	4.24	1.11	68.1	8.64	.38	63.1	7.68	.18
OASPL	103.3	6.97	.30	104.9	7.86	.37	105.3	7.97	.34	99.2	6.76	.37	104.1	8.47	.40	102.2	8.23	.16

RUNS 841- 856, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	81.8	7.04	.30	.0	.00	.00	90.1	4.98	.42	91.2	5.88	.42	91.2	5.64	.24
630	77.8	6.01	.11	.0	.00	.00	86.6	6.45	.04	88.7	7.80	.30	87.4	7.22	.09
1250	72.8	7.42	.13	.0	.00	.00	80.9	7.82	.03	83.2	8.22	.22	83.4	8.41	.32
2500	67.0	5.40	.55	.0	.00	.00	75.7	5.55	.60	78.2	6.60	.41	77.9	6.33	.82
5000	60.5	6.12	.05	.0	.00	.00	70.1	5.46	.05	73.1	7.55	.12	73.5	7.73	.55
OASPL	93.1	5.17	.19	.0	.00	.00	100.2	5.35	.09	101.2	5.65	.26	100.4	5.41	.31

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.9	5.22	.09	90.4	5.39	.07	89.6	5.83	.19	84.6	5.24	.18	81.0	5.51	.41	.0	.00	.00
630	85.6	5.59	.07	86.7	6.17	.18	86.5	6.74	.08	82.8	6.10	.32	81.2	7.03	.46	.0	.00	.00
1250	82.6	7.87	.06	83.2	7.58	.25	83.3	7.73	.07	80.0	7.36	.33	78.6	8.50	.32	.0	.00	.00
2500	79.4	5.97	.56	80.2	6.28	.55	80.8	6.00	.77	78.2	6.20	.47	75.2	7.33	.79	.0	.00	.00
5000	76.7	7.52	.29	76.0	7.15	.17	78.6	8.16	.26	74.5	7.13	.42	70.0	7.80	.80	.0	.00	.00
OASPL	100.2	5.16	.07	100.4	5.23	.04	100.4	5.85	.06	97.0	5.66	.25	95.0	7.02	.55	.0	.00	.00

RUNS 841- 856, MICROPHONES 60 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	73.4	5.89	.43				82.0	5.45	.17	83.7	6.26	.23	82.7	5.02	.09
630	69.5	6.04	.37				78.7	6.52	.15	80.4	7.23	.30	79.4	6.70	.23
1250	64.0	7.61	.23				72.7	7.42	.05	75.5	8.47	.25	74.6	7.27	.11
2500	54.3	5.34	1.28				67.7	6.07	.38	70.1	7.60	.81	69.1	6.38	.39
5000	43.7	5.85	.36				58.9	5.93	.32	62.1	7.96	.51	62.3	7.26	.23
OASPL	84.4	5.71	.34				91.8	5.36	.07	93.4	5.91	.21	92.3	5.21	.06

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	82.8	4.78	.17	84.1	6.08	.10	82.9	6.17	.47	78.2	4.92	.06	71.8	5.08	.39			
630	79.3	6.63	.04	79.3	6.64	.09	79.5	7.19	.22	76.3	5.78	.37	70.1	5.91	.55			
1250	75.4	7.75	.12	76.0	8.01	.02	76.1	8.42	.18	73.3	7.22	.28	66.2	7.34	.12			
2500	71.2	6.28	.58	72.2	6.95	.24	73.1	7.30	.48	70.4	6.24	.51	59.9	5.71	.68			
5000	65.6	7.46	.15	65.7	8.11	.08	67.3	8.17	.36	63.8	6.95	.21	52.0	6.78	.51			
OASPL	92.5	5.28	.03	93.2	5.95	.08	92.9	6.22	.23	89.8	5.64	.16	85.0	6.36	.21			

TABLE A-II.- CONTINUED.

RUNS 841- 856, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	76.2	6.12	.32	81.2	6.56	.15	83.5	6.20	.17	84.6	6.15	.25	84.4	4.98	.17			
630	73.2	6.14	.07	78.7	6.10	.18	81.3	5.76	.10	83.2	6.71	.27	82.7	6.24	.51			
1250	65.9	6.19	.08	72.6	6.80	.09	76.8	6.95	.21	79.2	7.24	.22	80.2	7.84	.13			
2500	58.8	5.11	.48	67.3	5.51	.80	73.6	6.20	.45	76.1	7.09	.84	76.0	7.19	.54			
5000	53.6	4.95	.34	61.3	5.58	.11	67.6	6.65	.15	70.7	7.83	.43	71.6	7.92	.28			
OASPL	87.1	6.21	.12	91.5	5.39	.11	93.9	5.39	.07	95.8	6.71	.32	95.4	5.82	.12			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	84.3	5.40	.08	88.7	5.97	.42	85.4	5.32	.24	78.5	4.50	.39	77.0	4.80	.28	78.2	5.89	.12
630	82.8	6.30	.11	82.9	6.87	.45	82.9	6.66	.22	77.0	5.77	.50	74.1	6.01	.44	75.4	6.20	.17
1250	80.0	7.45	.24	80.6	8.18	.53	80.8	8.16	.26	73.1	6.59	.90	70.1	6.57	.36	70.7	6.61	.26
2500	78.4	6.87	.36	79.5	8.47	.37	79.4	6.93	.44	70.8	5.79	1.81	65.0	4.43	1.14	65.1	4.70	.52
5000	75.1	7.64	.26	78.0	8.82	.58	76.0	8.15	.48	67.3	6.29	1.58	60.6	6.10	.57	58.0	5.88	.19
OASPL	95.5	5.39	.04	96.2	6.23	.27	95.9	6.19	.12	91.0	5.45	.45	88.9	5.56	.24	89.2	6.31	.08

RUNS 841- 856, MICROPHONES 0 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	73.8	4.24	.30	78.7	4.96	.14	80.1	5.16	.42	80.8	5.11	.14	81.4	5.14	.23			
630	71.8	5.51	.20	76.4	5.61	.32	78.6	6.10	.07	79.4	6.37	.16	79.3	5.82	.19			
1250	66.4	6.60	.21	70.5	6.05	.14	74.6	7.01	.16	75.8	7.60	.18	76.2	7.57	.01			
2500	59.6	4.96	.53	65.8	5.41	.36	70.8	5.29	.61	71.8	6.53	.52	73.0	7.17	.24			
5000	52.9	4.85	.22	61.0	4.46	.11	64.6	5.82	.11	67.2	7.19	.09	69.2	7.30	.14			
OASPL	86.4	4.62	.14	90.3	4.87	.14	91.7	5.05	.16	92.3	5.23	.14	92.6	5.10	.07			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	81.0	4.88	.08	82.7	5.58	.23	83.4	5.42	.42	84.6	6.87	.07	86.8	7.88	.18	83.0	6.70	.38
630	79.8	5.95	.37	80.6	6.20	.34	80.9	6.04	.37	82.4	6.76	.26	83.4	7.77	.38	80.1	6.07	.87
1250	75.9	6.59	.26	77.4	7.17	.41	77.8	6.70	.39	78.1	7.25	.26	79.8	8.80	.43	78.6	7.77	.21
2500	73.9	5.16	.18	75.4	6.10	.75	75.3	4.87	.71	74.3	6.01	.44	78.9	8.93	.46	68.3	6.38	.61
5000	71.5	6.38	.42	71.5	7.29	.16	72.8	6.42	.38	68.8	6.79	.28	80.4	7.00	.68	61.6	6.48	.22
OASPL	92.9	4.74	.03	93.6	5.58	.27	94.2	5.76	.88	94.8	6.11	.12	95.6	7.17	.32	92.8	6.61	.16

RUNS 857- 864, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	82.6	7.22	.34	.0	.00	.00	90.8	5.23	.21	92.1	6.01	.36	91.9	5.52	.26			
630	78.9	5.44	.03	.0	.00	.00	86.6	6.40	.06	87.7	6.41	.59	86.9	6.27	.28			
1250	73.1	7.71	.12	.0	.00	.00	80.5	7.50	.20	83.3	8.48	.40	84.0	8.80	.28			
2500	66.5	5.07	.48	.0	.00	.00	76.0	6.02	.51	78.1	6.43	.72	78.0	6.71	.26			
5000	59.9	6.36	.15	.0	.00	.00	69.5	5.56	.21	72.5	7.38	.34	74.1	8.28	.20			
OASPL	93.5	6.05	.16	.0	.00	.00	100.4	5.15	.16	101.4	5.38	.27	101.1	5.66	.14			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.4	4.86	.28	91.2	5.39	.07	89.8	5.55	.14	85.1	5.15	.10	80.8	5.19	.48	.0	.00	.00
630	86.5	6.25	.13	87.0	6.25	.09	87.1	6.50	.13	82.9	5.90	.17	80.9	6.46	.44	.0	.00	.00
1250	82.8	7.81	.11	83.7	7.77	.21	84.2	8.08	.20	80.2	7.38	.04	79.0	7.84	.30	.0	.00	.00
2500	79.2	5.83	.61	79.6	5.81	.56	81.4	6.60	.41	78.3	6.31	.33	75.0	6.61	.82	.0	.00	.00
5000	76.0	7.41	.21	75.8	7.46	.16	78.4	8.36	.24	74.4	7.14	.09	69.9	7.50	.48	.0	.00	.00
OASPL	100.5	4.98	.05	100.7	5.02	.03	100.8	5.66	.11	97.1	5.30	.16	94.8	6.69	.44	.0	.00	.00

RUNS 857- 864, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
315	76.4	6.01	.44	81.6	6.28	.25	83.6	5.93	.32	85.1	5.86	.16	84.1	4.49	.13			
630	73.4	5.85	.23	78.6	5.35	.02	81.8	5.72	.06	83.9	6.58	.09	83.0	6.01	.03			
1250	66.8	6.61	.09	73.5	6.96	.21	77.4	7.17	.23	79.9	7.61	.18	79.7	7.29	.19			
2500	59.3	5.61	.24	67.0	5.68	.49	73.0	5.97	.38	75.6	6.62	.59	75.0	6.58	.46			
5000	53.3	4.93	.19	61.3	6.21	.18	67.5	6.84	.16	70.8	7.95	.18	71.1	8.04	.01			
OASPL	87.6	5.11	.06	91.4	4.83	.02	94.2	5.19	.07	95.9	5.73	.16	95.0	5.12	.09			
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	84.0	4.99	.29	85.8	5.59	.43	85.8	5.59	.17	79.4	4.58	.08	78.0	5.01	.29	79.5	5.65	.26
630	82.7	5.97	.06	83.1	6.66	.23	83.3	6.67	.16	76.9	5.23	.23	74.2	5.88	.14	76.8	6.02	.22
1250	79.5	7.10	.02	80.6	8.19	.41	80.2	7.62	.15	73.3	6.37	.17	70.9	6.93	.36	72.0	7.16	.17
2500	78.2	6.77	.47	78.5	7.29	.18	79.2	7.48	.49	70.0	5.09	.73	65.9	4.98	.41	65.1	5.47	.74
5000	74.8	7.58	.13	74.4	8.28	.28	75.6	7.99	.26	66.8	6.04	.19	60.7	6.01	.56	55.6	6.29	.27
OASPL	95.4	5.11	.06	96.1	5.85	.23	96.1	6.08	.17	91.0	5.14	.13	89.3	5.84	.14	89.8	6.14	.12

TABLE A-II.- CONTINUED.

MID FREQ, 1/3 OCT; SPL, 250 M/S; EXP. OF VJ; SCATTER

RUNS 865- 868, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	74.5	5.23	.41	.0	.00	.00	81.8	5.04	.22	84.2	6.09	.20	84.4	5.52	.41
630	73.5	5.61	.42	.0	.00	.00	81.3	5.91	.12	83.5	6.33	.17	83.2	6.08	.43
1250	71.4	7.14	.22	.0	.00	.00	79.2	7.35	.20	82.5	7.81	.20	82.5	7.21	.26
2500	65.8	5.99	.87	.0	.00	.00	76.8	6.84	.16	79.4	7.78	.37	79.4	7.41	.35
5000	59.5	6.89	.40	.0	.00	.00	71.2	6.67	.17	74.0	8.03	.20	75.1	8.20	.56
OASPL	91.8	6.07	.25	.0	.00	.00	97.6	5.35	.02	99.1	5.95	.14	98.3	5.67	.30

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.4	5.21	.17	86.4	6.17	.16	87.4	6.98	.29	85.4	6.84	.16	82.1	6.47	.32			
630	83.1	5.64	.04	84.9	6.64	.16	86.2	7.51	.24	82.5	6.49	.21	80.8	7.27	.41			
1250	82.1	7.16	.08	83.9	7.82	.03	83.8	8.17	.26	79.9	7.43	.21	78.0	7.83	.43			
2500	80.2	5.91	.74	81.4	7.27	.20	82.2	7.58	.49	78.4	6.83	.25	75.2	6.36	1.00			
5000	77.1	7.22	.09	78.1	8.76	.47	79.2	8.69	.22	74.8	7.61	.16	70.4	7.93	.43			
OASPL	97.9	5.02	.07	98.4	5.68	.17	98.9	6.37	.25	96.7	6.47	.10	96.4	7.88	.38			

RUNS 869- 872, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	74.6	5.59	.67	.0	.00	.00	81.5	4.88	.41	83.8	5.99	.42	84.6	5.79	.55
630	72.9	6.04	.37	.0	.00	.00	80.7	6.09	.13	84.0	7.13	.23	83.4	6.56	.32
1250	69.3	6.88	.52	.0	.00	.00	78.1	7.46	.14	82.3	8.35	.40	82.2	7.68	.48
2500	65.4	5.71	.86	.0	.00	.00	77.0	7.01	.41	79.5	7.58	.55	79.5	7.33	.79
5000	59.6	6.64	.58	.0	.00	.00	71.0	6.70	.22	74.0	8.11	.34	75.1	8.01	.56
OASPL	92.0	6.46	.37	.0	.00	.00	97.7	5.42	.19	98.7	5.60	.26	98.2	5.24	.32

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.0	5.63	.17	86.8	6.41	.04	87.0	6.99	.22	85.7	6.64	.28	81.9	6.03	.49	.0	.00	.00
630	83.6	6.44	.13	84.7	6.63	.11	85.5	7.44	.43	82.4	5.88	.38	81.1	6.96	.65	.0	.00	.00
1250	81.9	7.39	.05	83.4	7.78	.11	83.8	8.56	.19	79.7	6.78	.41	78.3	7.90	.68	.0	.00	.00
2500	80.1	5.40	.68	81.5	6.95	.24	81.8	6.93	.35	78.9	6.14	.63	76.1	6.44	.69	.0	.00	.00
5000	77.4	7.05	.31	77.9	7.83	.11	79.3	8.35	.40	75.2	7.14	.48	71.2	7.74	.88	.0	.00	.00
OASPL	97.8	4.80	.09	98.6	5.53	.19	99.0	6.20	.23	96.9	6.26	.34	96.4	7.44	.52	.0	.00	.00

RUNS 873- 876, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	74.6	5.42	.41	.0	.00	.00	81.8	5.28	.17	83.9	5.89	.31	84.9	5.95	.37
630	72.5	5.56	.46	.0	.00	.00	81.0	6.37	.16	83.8	6.99	.22	83.6	6.79	.39
1250	69.1	6.78	.52	.0	.00	.00	78.5	7.92	.25	82.4	8.65	.31	82.5	7.95	.18
2500	65.4	5.23	.97	.0	.00	.00	76.7	7.14	.48	79.5	7.59	.37	79.7	7.38	.54
5000	59.8	6.87	.65	.0	.00	.00	71.4	7.07	.23	74.0	8.36	.27	75.6	8.39	.87
OASPL	92.5	6.48	.38	.0	.00	.00	97.8	5.48	.09	99.3	5.82	.15	98.8	5.58	.29

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.8	5.31	.10	86.5	6.27	.26	87.1	7.13	.23	85.9	6.83	.28	82.2	6.54	.31	.0	.00	.00
630	84.3	6.72	.14	84.9	6.99	.17	85.7	7.32	.24	83.3	6.85	.13	81.4	7.82	.55	.0	.00	.00
1250	82.3	7.72	.11	83.9	8.24	.50	83.9	8.76	.05	80.1	7.10	.26	78.5	8.24	.63	.0	.00	.00
2500	80.8	6.48	.20	81.5	7.22	.26	81.8	6.92	.81	79.1	6.03	.37	76.1	6.84	.89	.0	.00	.00
5000	77.6	7.41	.09	77.9	8.01	.44	79.5	8.54	.27	75.6	7.26	.38	71.4	8.24	.63	.0	.00	.00
OASPL	98.4	5.10	.08	98.7	5.70	.24	99.0	6.33	.06	97.0	6.34	.06	96.5	7.54	.49	.0	.00	.00

RUNS 877- 890, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 2, 45 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 3, 60 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 4, 75 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 5, 82.5 DEG AFT OF NOSE SPL, 250 M/S	EXP. OF VJ	SCATTER
315	74.3	5.42	.41	.0	.00	.00	81.3	4.79	.40	84.2	6.08	.35	86.0	5.76	.36
630	72.6	5.61	.42	.0	.00	.00	80.9	6.05	.12	84.0	7.08	.39	84.2	7.14	.78
1250	69.3	6.87	.65	.0	.00	.00	78.7	7.80	.14	82.6	8.43	.18	82.8	7.93	.44
2500	65.9	6.14	.49	.0	.00	.00	77.0	6.82	.41	79.8	7.56	.34	80.1	7.43	.66
5000	59.9	6.84	.46	.0	.00	.00	71.3	6.67	.08	74.2	8.21	.33	75.2	7.81	.68
OASPL	91.7	6.26	.29	.0	.00	.00	97.9	5.71	.07	98.9	5.87	.14	98.4	5.55	.13

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 7, 97.5 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 8, 105 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 9, 120 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 10, 135 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER	MIKE 11, 150 DEG SPL, 250 M/S	EXP. OF VJ	SCATTER
315	84.5	4.88	.14	86.7	5.94	.28	86.6	6.14	.32	86.2	6.81	.53	81.6	5.62	.29			
630	84.1	6.28	.31	85.4	6.93	.08	85.1	6.68	.40	83.3	6.55	.28	81.1	6.97	.52			
1250	82.4	7.71	.83	84.1	8.02	.10	83.0	7.58	.33	80.5	7.36	.28	78.3	7.62	.67			
2500	80.5	5.34	.72	81.9	7.18	.34	81.7	6.46	.43	79.1	6.21	.32	76.3	6.41	.94			
5000	77.8	7.37	.29	78.0	7.96	.08	78.9	7.77	.38	76.5	8.08	.10	71.8	8.08	.81			
OASPL	97.9	4.88	.04	98.5	5.52	.22	98.3	5.68	.31	97.0	6.36	.37	96.2	7.06	.49			

TABLE A-II.- CONTINUED.

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER

RUNS 891- 894, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	74.7	5.53	.29	.0	.00	.00	81.9	5.38	.17	84.0	6.25	.22	84.8	5.90	.30
630	72.6	5.66	.36	.0	.00	.00	81.3	6.69	.34	83.9	7.14	.17	83.6	6.71	.32
1250	69.5	6.89	.40	.0	.00	.00	78.7	8.00	.08	82.5	8.58	.41	82.8	8.10	.12
2500	65.8	5.82	.43	.0	.00	.00	77.3	7.56	.12	79.5	7.43	.35	79.9	7.48	.41
5000	59.0	6.71	.27	.0	.00	.00	71.2	6.99	.15	74.5	8.81	.28	75.5	8.22	.31
OASPL	92.2	6.59	.33	.0	.00	.00	98.0	6.00	.04	98.9	6.05	.19	98.6	5.71	.16

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	85.3	5.90	.15	87.0	6.84	.06	86.9	6.99	.42	85.9	6.91	.04	82.1	6.30	.19			
630	83.9	6.36	.11	85.1	7.09	.26	85.1	7.16	.26	83.0	6.72	.09	81.1	7.06	.24			
1250	82.0	7.47	.27	83.8	8.18	.29	83.5	8.28	.20	80.2	7.66	.09	78.7	8.68	.27			
2500	80.7	5.90	.30	81.7	7.13	.22	81.8	7.11	.55	79.1	6.58	.27	76.4	6.87	.65			
5000	77.7	7.62	.33	78.1	8.37	.30	79.4	8.71	.38	75.7	7.97	.24	71.7	8.52	.21			
OASPL	96.1	5.18	.22	98.8	5.95	.18	98.6	6.25	.20	97.0	6.46	.08	96.5	7.56	.28			

RUNS 895- 900, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	82.4	6.49	.46				91.6	5.69	.56	93.0	6.28	.55	93.5	6.26	.22
630	78.4	5.96	.21				87.4	6.62	.19	88.1	7.07	.35	88.4	7.12	.32
1250	73.1	6.73	.54				80.8	7.27	.33	83.8	8.12	.57	83.7	7.77	.66
2500	67.0	5.21	.61				76.1	5.53	.44	78.7	6.32	.30	78.9	6.23	.49
5000	61.0	6.94	.28				70.6	6.57	.19	73.2	7.55	.41	74.1	7.71	.50
OASPL	93.6	5.44	.25				101.3	5.43	.23	102.1	5.58	.30	101.9	5.49	.18

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.5	5.81	.39	91.9	6.10	.28	90.9	6.24	.22	85.8	5.68	.25	81.3	5.26	.17	.0	.00	.00
630	87.1	6.58	.22	87.5	6.92	.37	87.2	6.80	.35	83.2	6.22	.29	81.6	6.42	.36	.0	.00	.00
1250	82.6	7.53	.26	83.9	7.87	.31	83.8	7.89	.43	80.2	7.24	.17	79.3	7.30	.46	.0	.00	.00
2500	79.6	5.99	.43	80.9	6.20	.58	81.4	6.27	.48	78.9	5.91	.48	76.3	6.02	.79	.0	.00	.00
5000	75.9	7.59	.14	77.0	8.06	.30	78.7	8.14	.46	75.1	7.18	.28	71.1	7.09	.62	.0	.00	.00
OASPL	100.9	5.08	.22	101.4	5.59	.26	101.1	5.70	.24	97.3	5.29	.10	94.8	5.91	.53	.0	.00	.00

RUNS 905- 908, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	81.3	6.97	.41	.0	.00	.00	89.0	4.86	.28	91.2	6.00	.23	92.2	6.33	.37
630	76.9	5.86	.37	.0	.00	.00	85.9	6.28	.20	87.0	6.87	.11	87.2	6.77	.30
1250	72.1	7.31	.36	.0	.00	.00	79.3	7.01	.48	82.7	8.18	.04	83.1	7.98	.32
2500	66.8	6.24	.70	.0	.00	.00	76.2	6.68	.53	78.7	7.53	.13	79.4	7.80	.22
5000	59.9	6.78	.49	.0	.00	.00	69.8	6.13	.26	73.0	7.86	.08	74.3	8.17	.36
OASPL	93.0	5.83	.32	.0	.00	.00	100.1	5.02	.22	101.4	5.43	.07	101.2	5.43	.28

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.8	5.21	.11	91.2	6.20	.35	90.4	6.03	.12	85.7	5.63	.18	81.3	5.29	.29	.0	.00	.00
630	85.8	6.23	.37	86.7	6.49	.47	86.4	6.62	.27	83.1	5.68	.32	82.3	7.14	.22	.0	.00	.00
1250	81.7	7.44	.15	83.6	7.64	.55	83.8	8.17	.16	80.4	7.15	.34	79.7	8.08	.25	.0	.00	.00
2500	79.2	6.47	.32	81.3	7.33	.31	82.1	7.06	.11	79.3	6.29	.23	77.2	6.93	.46	.0	.00	.00
5000	75.4	7.52	.23	77.2	8.11	.54	79.0	8.48	.03	75.2	7.02	.40	72.3	8.45	.38	.0	.00	.00
OASPL	100.1	4.70	.19	100.9	5.32	.43	100.6	5.40	.11	97.1	5.22	.17	95.6	6.91	.32	.0	.00	.00

RUNS 909- 916, MICROPHONES 90 DEGREES BELOW WINGTIP-

	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	75.7	5.72	.30				82.3	5.58	.11	85.2	6.96	.35	85.1	6.18	.14
630	73.6	6.20	.19				81.5	6.15	.05	83.6	6.88	.23	83.2	6.18	.14
1250	70.1	7.49	.06				78.9	7.44	.20	82.7	8.67	.31	81.7	7.38	.20
2500	65.9	5.10	.78				77.4	6.56	.15	79.4	7.71	.30	78.5	6.38	.38
5000	60.2	7.43	.23				71.9	7.29	.19	74.6	8.81	.28	74.0	7.82	.19
OASPL	92.7	6.53	.27				98.5	5.67	.09	99.6	6.13	.18	98.2	5.14	.12

	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	85.6	6.44	.05	87.4	6.84	.12	87.0	6.91	.27	86.0	6.97	.35	81.8	5.87	.14	.0	.00	.00
630	84.4	7.06	.09	85.4	7.46	.16	85.2	7.30	.38	82.6	6.40	.33	81.3	6.86	.21	.0	.00	.00
1250	81.6	7.58	.13	83.7	8.28	.28	83.0	8.21	.34	79.6	7.17	.23	78.6	8.30	.44	.0	.00	.00
2500	80.7	6.89	.22	81.6	7.59	.16	81.8	7.51	.31	78.7	6.11	.45	76.4	6.91	.71	.0	.00	.00
5000	76.7	7.71	.24	77.5	7.99	.29	78.5	8.37	.35	75.5	7.60	.21	71.5	8.06	.50	.0	.00	.00
OASPL	98.3	5.31	.14	98.9	5.66	.22	98.5	6.08	.28	97.1	6.51	.24	96.2	7.18	.36	.0	.00	.00

TABLE A-II.- CONTINUED.

RUNS 909- 916, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	71.5	5.16	.07	95.1	56.*	14.*	79.8	6.26	.20	83.1	6.96	.14	82.4	5.42	.24
630	69.0	5.97	.06	93.2	55.*	14.*	76.2	6.21	.12	81.6	7.10	.19	81.4	6.56	.21
1250	64.0	6.47	.15	78.1	51.*	13.*	74.8	7.43	.07	79.2	8.15	.06	79.6	7.87	.01
2500	59.2	5.94	.19	74.2	49.*	12.*	73.7	7.23	.04	76.4	7.47	.29	76.1	6.79	.22
5000	54.6	5.99	.31	66.6	44.*	10.*	67.7	7.36	.33	71.2	8.30	.44	71.1	7.41	.18
OASPL	87.7	5.95	.19	102.9	66.*	17.*	93.3	5.81	.03	94.6	5.87	.26	94.4	5.37	.10

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	82.7	6.01	.03	84.4	6.49	.10	84.9	6.63	.32	77.5	4.40	.48	72.0	5.16	.18	68.7	4.81	.18
630	81.6	6.73	.16	82.0	7.16	.18	81.3	6.69	.19	73.8	3.86	.59	68.1	5.29	.16	64.8	5.28	.44
1250	79.1	7.50	.26	80.0	7.92	.14	79.9	8.34	.28	71.6	5.08	.78	65.4	6.08	.27	60.8	5.94	.28
2500	78.2	6.87	.13	78.9	7.67	.23	79.0	6.77	.30	71.0	4.47	1.13	62.5	5.49	.49	56.5	4.88	.09
5000	74.3	8.06	.24	74.7	8.53	.33	75.9	8.59	.22	67.6	5.84	.99	58.4	5.98	.28	48.8	6.08	.38
OASPL	94.6	5.61	.06	95.6	6.29	.12	95.9	6.60	.22	92.2	5.92	.26	89.6	6.08	.11	87.1	6.93	.23

RUNS 917- 920, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	86.5	7.51	.23	92.3	7.02	.31	92.7	6.15	.13	94.3	6.86	.33	93.7	6.38	.12
630	82.7	7.05	.32	88.1	7.13	.41	88.5	7.06	.02	89.7	7.28	.25	89.5	7.46	.30
1250	76.7	8.25	.11	82.0	8.67	.43	83.1	8.12	.32	85.7	8.25	.11	86.0	8.84	.28
2500	71.8	7.02	.07	76.8	7.22	.51	79.8	7.07	.41	81.4	7.39	.21	81.5	7.77	.50
5000	65.3	8.28	.28	71.0	8.27	.54	73.5	7.50	.37	76.4	9.05	.09	76.8	9.10	.44
OASPL	96.8	6.63	.41	100.9	6.42	.31	101.7	5.69	.03	102.8	6.34	.20	102.4	6.39	.24

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	92.1	6.49	.52	90.0	5.20	.26	88.9	6.32	.43	.0	.00	.00	85.2	6.59	.26	87.2	7.28	.28
630	88.4	6.82	.12	87.4	5.85	.37	86.8	6.76	.30	.0	.00	.00	83.9	6.22	.40	85.2	7.08	.40
1250	84.4	8.10	.10	84.0	7.39	.14	83.9	7.86	.21	.0	.00	.00	80.2	6.62	.41	81.5	8.37	.26
2500	81.6	6.29	.64	82.0	6.11	.45	82.6	6.57	.29	.0	.00	.00	75.8	6.86	.24	75.4	7.67	.61
5000	78.1	8.56	.15	78.3	7.72	.06	79.8	8.31	.28	.0	.00	.00	69.2	8.23	.38	66.5	8.30	.44
OASPL	101.3	5.95	.26	101.2	5.88	.12	100.9	6.62	.22	.0	.00	.00	96.8	6.26	.28	97.0	6.97	.24

RUNS 921- 928, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	85.0	7.14	.32				92.1	6.72	.41	93.7	7.34	.44	93.2	7.02	.18
630	81.6	7.02	.51				88.7	7.92	.14	89.4	8.19	.41	89.1	7.93	.38
1250	75.8	7.89	.24				83.0	8.39	.16	85.5	8.45	.31	85.6	8.71	.13
2500	70.8	6.16	.19				79.4	7.00	.16	81.2	7.38	.19	81.0	7.48	.18
5000	64.7	7.20	.45				73.8	7.49	.09	76.1	8.62	.46	76.6	8.71	.13
OASPL	96.1	6.62	.64				101.4	6.18	.40	102.1	6.42	.24	101.8	6.71	.22

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.6	6.32	.24	90.8	5.80	.31	88.7	6.07	.42				83.0	6.60	.40	86.5	7.23	.34
630	87.8	6.81	.17	87.6	6.58	.10	86.5	6.88	.28				81.4	6.22	.40	84.3	7.32	.35
1250	83.9	7.88	.18	85.0	8.28	.11	83.9	7.72	.43				77.8	6.79	.84	80.5	8.88	.26
2500	81.3	6.80	.26	82.4	6.76	.59	82.1	6.01	.21				73.3	6.16	1.01	74.7	7.60	.92
5000	77.6	7.72	.20	78.4	7.70	.06	79.7	7.96	.48				67.8	6.92	.83	66.9	6.84	.62
OASPL	100.9	6.04	.11	101.3	6.14	.19	100.9	6.74	.26				95.2	6.63	.21	96.8	7.30	.24

RUNS 921- 928, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	80.1	6.92	.28				87.3	6.33	.18	88.1	7.10	.32	86.1	6.19	.31
630	76.9	6.84	.39				85.1	6.66	.24	85.3	7.19	.47	84.7	6.90	.27
1250	70.0	7.57	.32				80.8	7.18	.16	82.6	8.23	.38	82.0	8.01	.56
2500	64.0	6.99	.42				77.4	6.70	.17	79.6	7.65	.47	78.0	6.69	.95
5000	57.8	6.68	.40				71.1	7.12	.12	73.6	8.00	.50	73.8	7.81	.68
OASPL	91.9	6.75	.32				97.2	6.11	.14	98.2	6.58	.43	97.6	6.18	.44

MID FREQ, 1/3 OCT	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150		
315	83.3	4.92	.53	81.6	4.67	.27	81.6	4.75	.60	87.3	6.67	.66	89.1	7.60	.40	84.3	6.88	
630	81.8	5.66	.29	79.4	5.21	.07	78.9	5.88	.63	83.4	6.24	.34	86.1	7.38	.27	82.1	7.08	
1250	78.5	6.59	.37	74.3	5.88	.13	74.3	6.81	.55	79.0	6.33	.69	82.8	8.62	.23	77.0	7.66	
2500	77.2	5.85	.63	71.3	5.29	.32	71.3	5.73	.35	77.7	6.71	.59	78.8	8.19	.30	72.4	8.13	
5000	73.2	6.79	.34	67.4	6.13	.28	67.0	6.15	.43	71.3	7.28	.69	72.5	8.70	.38	63.7	6.81	
OASPL	95.8	5.27	.40	94.4	5.43	.08	93.5	5.45	.43	96.8	6.62	.54	98.4	7.42	.21	93.8	6.34	

TABLE A-II.- CONTINUED.

RUNS 937- 940, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE					
	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER	SPL, 250 M/S	EXP. OF VJ	SCAT-TER
315	83.1	7.55	.40				89.4	7.07	.04	90.9	7.04	.30	90.8	7.04	.34			
630	80.2	8.50	.35				86.9	7.79	.36	88.1	8.22	.20	88.2	8.64	.39			
1250	75.3	8.51	.33				82.4	8.19	.20	86.1	9.26	.33	86.2	9.22	.28			
2500	70.9	7.54	.43				79.5	6.87	.29	81.6	8.49	.42	81.6	8.20	.56			
5000	64.4	8.10	.45				73.5	7.46	.18	75.9	8.88	.44	76.7	8.69	.43			
OASPL	95.7	6.65	.33				100.3	5.54	.10	101.5	6.27	.23	101.1	6.07	.32			

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	90.6	6.44	.13	91.8	7.26	.18	90.6	6.84	.12	82.7	6.19	.08				80.4	5.82	.02
630	87.8	7.92	.13	88.4	7.93	.15	87.0	7.21	.07	80.4	6.29	.27				77.8	7.63	.08
1250	84.0	8.26	.11	85.0	8.80	.48	84.9	8.50	.23	77.7	7.30	.21				71.6	7.81	.12
2500	81.5	7.28	.28	81.9	7.39	.21	82.7	6.92	.21	77.3	5.95	.84				66.1	6.79	.22
5000	77.4	7.78	.17	78.1	8.70	.24	79.2	8.87	.52	73.9	7.15	.41				58.4	7.28	.19
OASPL	101.0	5.82	.19	101.7	6.54	.15	101.6	6.71	.21	96.8	6.48	.10				93.8	6.80	.12

RUNS 945- 948, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	83.2	8.11	.17	.0	.00	.00	87.4	6.60	.05	89.2	7.59	.37	89.7	8.49	.45
630	79.7	8.27	.22	.0	.00	.00	86.3	7.91	.16	87.0	7.95	.18	87.7	8.37	.69
1250	75.6	8.79	.22	.0	.00	.00	82.6	8.56	.26	84.6	9.17	.38	85.4	9.29	.54
2500	71.0	7.16	.42	.0	.00	.00	80.2	6.85	.77	81.8	8.37	.35	82.0	7.96	.93
5000	65.2	8.30	.56	.0	.00	.00	74.7	7.80	.24	76.7	8.99	.33	77.2	8.58	.58
OASPL	96.3	7.41	.33	.0	.00	.00	100.1	6.24	.18	100.6	6.56	.15	100.4	6.62	.47

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	89.7	7.81	.11	91.6	7.89	.17	90.8	7.32	.19	81.7	5.58	.14	.0	.00	.00	79.1	7.14	.16
630	87.5	8.08	.25	88.3	7.75	.26	87.2	7.89	.17	79.7	5.70	.43	.0	.00	.00	74.0	7.49	.15
1250	83.8	8.23	.20	85.8	9.11	.26	84.6	8.31	.28	77.8	6.78	.50	.0	.00	.00	69.4	7.84	.13
2500	81.9	7.12	.47	82.5	7.50	.31	83.2	7.00	.32	77.5	5.30	.62	.0	.00	.00	65.0	7.06	.35
5000	78.0	7.71	.23	78.4	8.62	.46	79.5	8.44	.06	74.1	6.82	.47	.0	.00	.00	57.0	6.95	.21
OASPL	100.3	6.39	.20	101.7	6.96	.12	102.1	7.32	.29	96.8	6.48	.19	.0	.00	.00	33.7	7.52	.24

RUNS 949- 952, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	85.8	7.22	.63				92.3	6.14	.34	94.2	6.78	.46	93.6	6.86	.47
630	83.0	7.68	.49				88.6	6.85	.34	89.9	7.73	.55	89.7	7.62	.15
1250	77.0	8.23	.35				83.0	7.58	.09	85.9	8.11	.54	85.9	8.24	.38
2500	71.5	6.57	.22				79.6	6.22	.39	81.5	6.91	.17	81.7	6.86	.66
5000	65.6	7.25	.44				73.4	6.39	.30	76.8	8.06	.48	78.4	8.41	.24
OASPL	96.5	6.40	.52				101.6	5.68	.35	102.6	6.25	.33	102.3	6.33	.22

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.7	5.94	.07	91.3	6.37	.13	88.9	5.63	.37	82.3	6.04	.19	83.4	6.62	.15	86.9	6.73	.02
630	87.9	6.30	.08	88.4	6.78	.46	86.6	6.60	.59	80.7	6.07	.44	81.8	6.23	.30	84.7	7.01	.15
1250	84.1	7.39	.06	85.1	8.04	.29	84.6	7.63	.53	76.5	6.96	.35	78.4	6.88	.42	81.2	8.18	.26
2500	81.5	6.03	.49	82.9	6.83	.11	83.5	6.31	.18	73.9	5.22	.34	75.0	6.57	.66	75.9	7.21	.47
5000	78.7	7.16	.08	79.1	7.78	.36	80.1	7.72	.43	69.9	5.93	.54	69.2	7.40	.36	67.8	6.30	.63
OASPL	101.2	5.66	.02	101.9	6.33	.26	101.3	6.27	.42	95.0	6.20	.31	95.8	6.62	.13	96.8	6.86	.16

RUNS 953- 956, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
315	86.1	6.81	.26	47.5	4.82	43.*	93.3	6.15	.43	95.1	6.60	.59	94.2	6.65	.22
630	82.5	6.72	.39	45.1	4.53	41.*	89.0	6.76	.35	90.6	7.63	.43	90.2	7.42	.32
1250	77.2	8.36	.16	41.7	4.46	37.*	83.5	7.61	.32	86.7	8.59	.11	86.6	8.76	.20
2500	71.7	6.97	.13	39.0	3.97	35.*	79.8	6.20	.11	81.8	7.30	.11	82.7	7.91	.44
5000	65.5	8.17	.16	36.1	3.94	32.*	73.7	6.97	.15	77.1	8.87	.13	79.0	9.54	.30
OASPL	97.0	6.36	.46	52.4	5.06	47.*	102.3	5.72	.23	103.4	6.40	.25	103.0	6.52	.09

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
315	91.6	5.93	.06	91.1	6.39	.34	89.1	6.11	.35				85.8	6.57	.25	88.5	7.66	.34
630	88.5	6.56	.11	88.9	7.30	.80	87.4	6.98	.58				85.4	6.44	.27	85.8	7.28	.28
1250	84.9	8.11	.08	85.6	8.85	.19	84.8	8.17	.16				81.7	7.07	.26	82.7	9.21	.16
2500	82.5	6.64	.58	83.1	7.28	.20	83.7	7.42	.28				77.4	6.69	.19	76.4	8.04	.21
5000	79.1	8.17	.29	79.3	8.75	.27	79.9	8.74	.15				70.8	8.09	.40	68.1	9.22	.35
OASPL	101.6	5.93	.06	102.3	6.72	.24	101.5	6.65	.34				97.9	6.63	.22	97.7	7.10	.21

TABLE A-II.- CONTINUED.

RUNS 1020-1032, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	55.0	5.57	33.*	57.9	5.66	35.*	58.5	5.22	35.*				90.0	8.27	.37
630	52.8	5.56	31.*	56.1	5.85	33.*	57.1	5.48	34.*				87.8	8.83	.35
1250	49.4	5.26	29.*	53.0	5.72	31.*	54.4	5.55	33.*				85.4	9.19	.48
2500	45.1	5.58	26.*	50.1	5.83	29.*	52.5	5.67	31.*				81.4	9.16	.50
5000	37.5	5.23	21.*	44.2	5.77	26.*	46.6	5.12	28.*				73.7	9.34	.86
OASPL	65.5	4.95	40.*	67.4	5.17	41.*	70.6	4.60	38.*				102.4	7.80	.30

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.8	7.76	.27	89.6	7.17	.10	90.6	7.75	.36	59.5	5.77	36.*	58.8	6.18	35.*	55.3	5.90	33.*
630	87.2	8.06	.20	87.3	7.82	.09	87.8	7.99	.26	57.7	5.78	35.*	56.1	5.97	33.*	51.7	5.61	31.*
1250	84.4	8.55	.36	84.5	8.11	.11	85.3	8.40	.39	55.5	5.72	33.*	53.8	5.95	32.*	48.8	5.68	29.*
2500	81.7	8.56	.28	81.2	8.31	.08	82.7	8.55	.36	54.1	5.86	32.*	51.2	6.06	30.*	45.5	5.42	27.*
5000	75.1	8.37	.46	75.0	8.22	.32	76.2	8.31	.45	50.0	5.67	30.*	47.3	5.99	27.*	39.5	5.47	23.*
OASPL	102.3	7.12	.26	101.9	8.64	.09	102.6	7.13	.29	67.6	5.59	41.*	67.1	6.11	41.*	65.2	6.14	39.*

RUNS 1020-1032, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	79.1	8.02	.10	83.4	7.90	.14	84.3	7.33	.28	87.5	8.64	.15	86.6	8.01	.26
630	74.1	7.63	.06	79.8	8.25	.39	82.1	8.28	.13	84.4	9.01	.16	84.8	8.80	.53
1250	68.9	8.26	.16	74.9	8.26	.29	77.8	8.18	.26	82.0	9.72	.05	81.4	8.86	.36
2500	62.2	8.52	.35	70.2	8.76	.20	75.3	8.85	.16	77.5	9.47	.18	77.1	9.21	.48
5000	51.3	8.80	.38	62.0	9.34	.46	65.5	8.19	.13	69.7	9.66	.14	69.5	9.17	.38
OASPL	94.8	6.46	.06	97.7	6.27	.12	97.9	5.90	.03	99.7	7.20	.18	99.3	7.06	.30

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.9	7.41	.09	87.2	7.99	.29	87.2	7.87	.05	84.9	7.62	.18	81.2	7.11	.10	72.5	7.12	.20
630	84.2	8.15	.06	84.5	8.31	.10	85.1	8.56	.28	82.7	7.95	.24	77.8	6.55	.11	68.6	6.73	.40
1250	80.8	8.24	.14	82.3	9.27	.31	82.1	8.23	.35	80.2	8.48	.27	74.5	6.98	.15	64.5	7.11	.42
2500	78.1	8.43	.19	78.4	8.95	.39	80.2	8.90	.45	77.6	8.21	.32	71.1	7.58	.09	58.5	7.28	.55
5000	72.1	8.71	.39	72.3	8.86	.52	73.7	9.10	.67	71.2	8.40	.37	64.6	8.04	.09	48.5	7.48	.43
OASPL	98.2	6.36	.16	99.0	7.53	.19	99.4	7.63	.18	97.4	7.59	.01	95.2	7.59	.14	91.4	7.21	.20

RUNS 1033-1040, MICROPHONES 90 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	85.8	7.31	.63	90.3	6.65	.55	90.8	6.61	.33	93.3	6.91	.39	93.2	7.28	.60
630	82.6	8.11	.42	88.3	7.75	.35	89.3	7.09	.40	90.4	7.15	.45	90.9	7.88	.53
1250	79.2	8.08	.40	83.8	7.72	.43	85.0	7.26	.30	87.0	7.99	.48	87.6	8.34	.53
2500	72.6	8.60	.52	79.1	8.38	.42	81.8	7.98	.31	82.7	8.88	.52	83.4	9.04	.68
5000	61.7	8.58	.52	70.3	8.34	.47	72.6	7.16	.18	74.5	8.82	.58	75.3	9.09	.73
OASPL	98.6	6.45	.43	101.5	6.41	.47	102.3	6.24	.26	103.6	6.96	.46	103.6	7.16	.56

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	91.6	7.03	.24	92.6	6.77	.44	92.7	6.72	.57	91.2	7.49	.43	85.6	7.90	.36	.0	.00	.00
630	89.4	7.41	.31	88.8	7.21	.47	89.4	7.81	.60	86.2	7.51	.48	82.6	8.37	.36	.0	.00	.00
1250	86.4	8.09	.40	85.8	7.60	.60	86.2	7.87	.78	82.7	7.82	.21	78.8	8.49	.53	.0	.00	.00
2500	83.7	8.62	.48	82.3	7.86	.43	83.2	8.06	.78	80.2	7.93	.61	74.6	8.76	.49	.0	.00	.00
5000	76.9	8.64	.50	76.4	8.34	.67	77.4	8.52	.64	73.7	7.86	.53	68.5	8.01	.48	.0	.00	.00
OASPL	103.4	6.71	.33	103.2	6.51	.50	103.7	6.79	.65	103.5	7.58	.51	101.0	7.74	.40	.0	.00	.00

RUNS 1033-1040, MICROPHONES 30 DEGREES BELOW WINGTIP-

MID FREQ, 1/3 OCT	MIKE 1, 30 DEG AFT			MIKE 2, 45 DEG			MIKE 3, 60 DEG			MIKE 4, 75 DEG			MIKE 5, 82.5 DEG AFT OF NOSE		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	81.8	7.30	.94	85.8	7.42	.55	87.0	6.40	.20	90.0	7.50	.62	90.5	7.93	.38
630	78.4	7.30	.50	83.2	7.69	.48	85.7	7.74	.56	87.8	8.06	.48	88.7	8.91	.21
1250	75.1	7.15	.88	80.1	7.70	.51	83.8	8.09	.40	85.6	8.59	.65	84.9	8.14	.23
2500	67.1	7.81	.86	75.7	8.65	.75	81.2	8.59	.66	81.3	9.00	.45	80.9	9.13	.30
5000	56.3	8.37	.84	67.4	8.61	.91	72.2	7.98	.47	73.2	9.01	.57	73.7	9.08	.41
OASPL	96.1	6.17	.55	99.1	6.14	.53	99.8	5.91	.41	101.3	7.05	.56	101.5	7.60	.33

MID FREQ, 1/3 OCT	MIKE 6, 90 DEG AFT			MIKE 7, 97.5 DEG			MIKE 8, 105 DEG			MIKE 9, 120 DEG			MIKE 10, 135 DEG			MIKE 11, 150 DEG		
	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER	SPL, 250 M/S	EXP. OF VJ	SCATTER
315	89.7	7.27	.36	90.0	8.15	.48	90.0	7.87	.48	81.9	5.60	.57	77.8	6.70	.44	81.7	6.15	.49
630	86.6	7.45	.35	85.6	7.84	.67	85.2	7.97	.61	79.9	6.25	.48	74.8	6.89	.40	78.5	5.91	.56
1250	82.4	7.55	.31	82.9	8.46	.72	83.2	8.43	.47	78.1	6.26	.55	72.8	7.25	.58	74.2	6.59	.66
2500	80.1	8.12	.24	80.1	9.44	.62	81.3	9.25	.63	75.6	6.81	.55	68.2	7.36	.47	67.5	6.26	.80
5000	74.2	8.34	.61	74.4	9.74	.74	75.1	9.58	.56	69.2	7.27	.29	61.1	7.98	.68	58.8	6.92	.72
OASPL	100.6	7.03	.28	101.3	8.01	.55	102.0	8.03	.47	97.8	6.75	.47	95.5	7.07	.83	85.4	6.14	.87

PAUSE

TABLE A-II.- CONCLUDED.

APPENDIX B

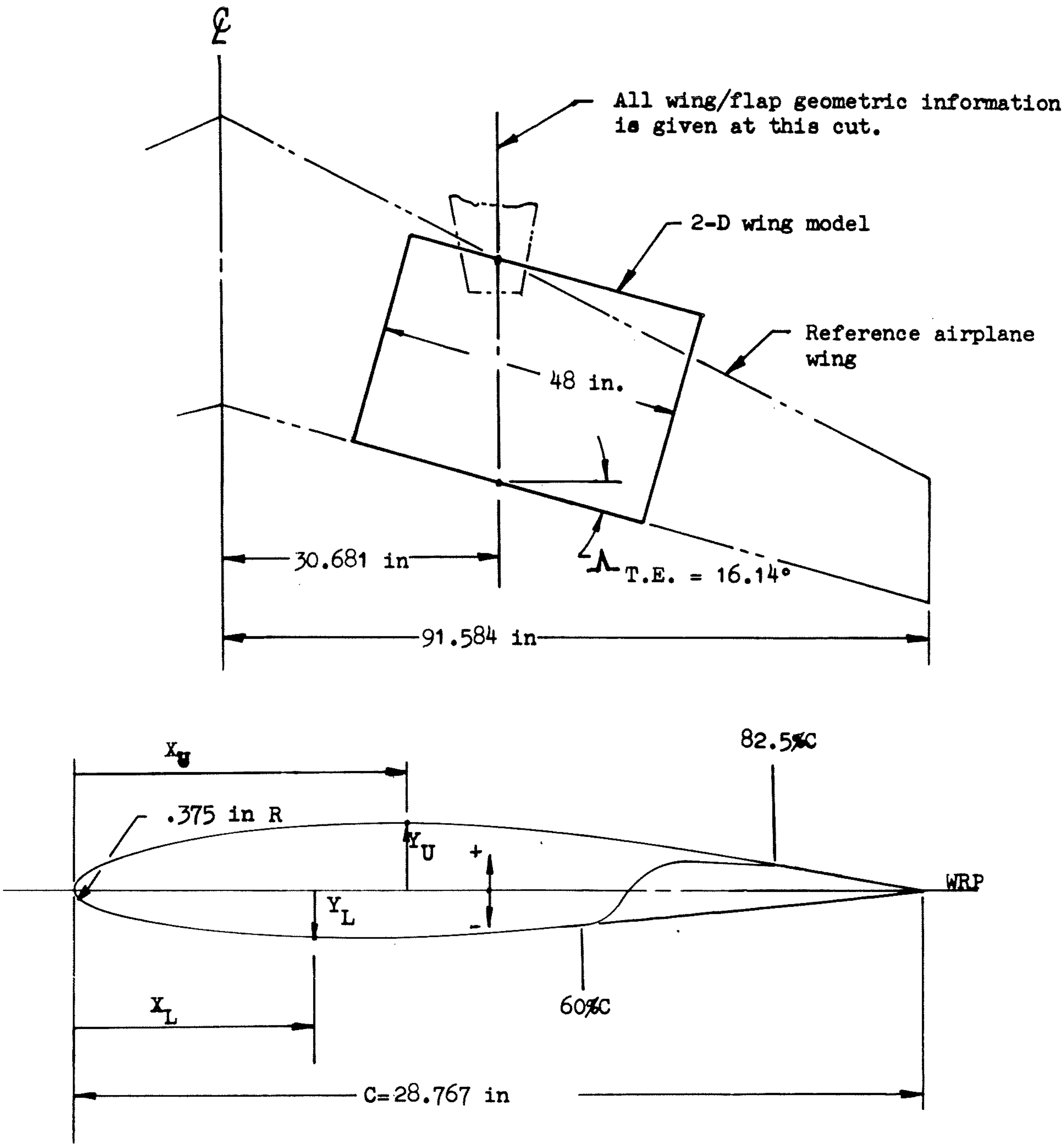
WING/FLAP GEOMETRY

Baseline A

Figures B-1 and B-2 and tables B-I and B-II describe the geometry of baseline A used in the static model test at one-fifth scale. The sketch at the top of figure B-1 shows how the 2-D wing model was oriented to simulate the same T.E. sweep as the reference airplane. The model nozzle was located half-way between the inboard and outboard engine positions with the T.E. of the wing model centered on the jet axis as shown. All of the wing and flap geometric information is given at this station. The sketch at the bottom of figure B-1 defines the wing and wing cove coordinates, which are given in table B-1. Figure B-2 defines the flap locations and geometry and table B-II gives the flap coordinates.

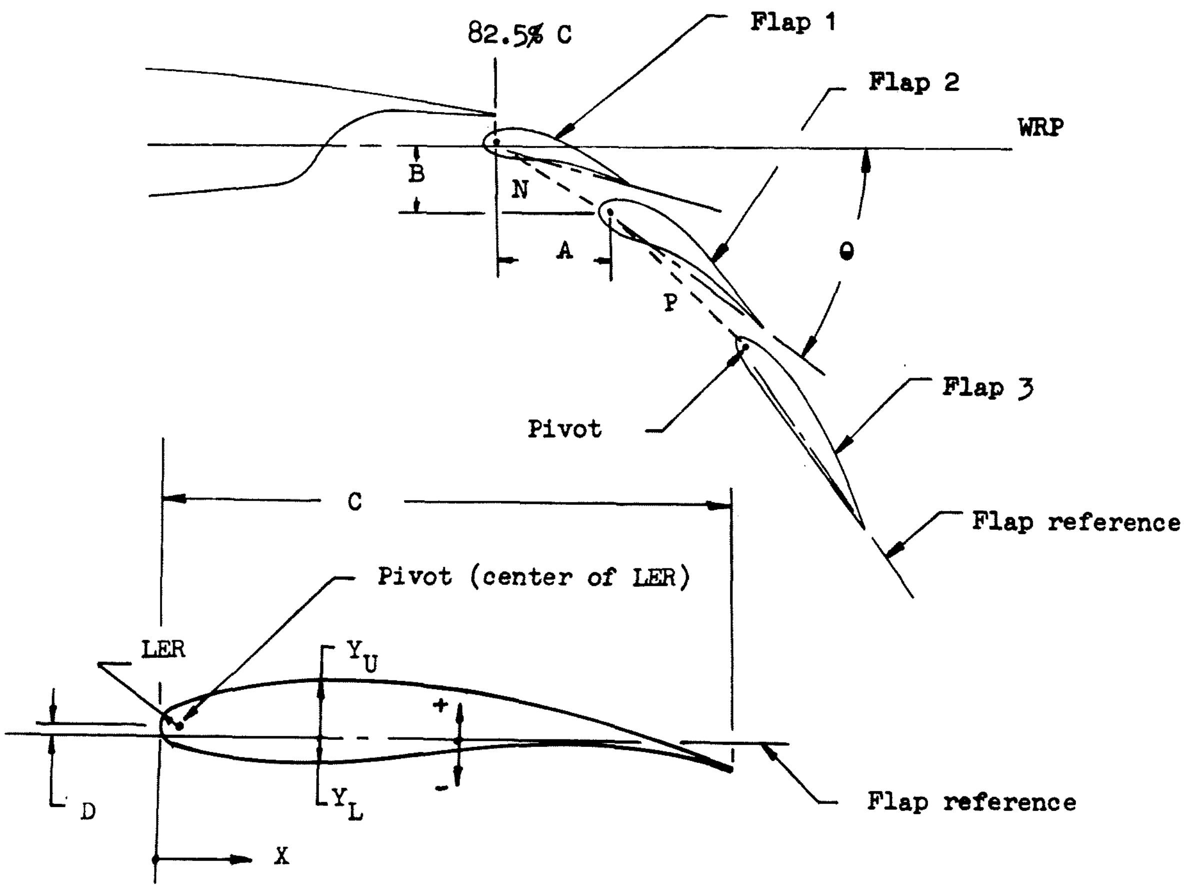
Baseline B

Figures B-3 and B-4 and tables B-III and B-IV give the same type of information for baseline B. Two differences from baseline A, other than chord length and contour shapes, are noted. First, the wing T.E. is at 0°. Second, two wing planes are used, as defined in figure B-3. The wing chord plane (WCP) is the reference for the wing and wing cove coordinates given in table B-III and is also the reference for defining flap angles as shown at the top of figure B-4. The flap angle, θ, is the angular movement of the flaps from the stowed (cruise) position. The wing reference plane (WRP) is used in defining the nozzle locations (section 4) and in locating the flaps in figure B-4.



All dimensions are for one-fifth-scale model.

Figure B-1.- Wing geometry, baseline A.



	Takeoff			Landing		
	Flap 1	Flap 2	Flap 3	Flap 1	Flap 2	Flap 3
θ, deg	0	20	40	15	35	55
A, in	-.207	3.607	8.285	-.207	-	-
B, in	-.103	.835	3.359	-.103	-	-
N, in	-	-	-	-	3.898	-
P, in	-	-	-	-	-	5.256
D, in	.007	.058	0	.007	.058	0
LER, in	.187	.250	.123	.187	.250	.123
C, in	4.315	5.753	6.472	4.315	5.753	6.472
g, in	-	-	-	-	.432	.432
All dimensions are for one-fifth-scale model.						

Figure B-2.- Flap geometry, baseline A.

Wing

X_U	Y_U	X_L	Y_L
0	0	0	0
.115	.316	.173	-.285
.181	.383	.250	-.339
.322	.498	.397	-.426
.676	.702	.762	-.584
1.389	1.004	1.487	-.800
2.106	1.234	2.209	-.955
2.825	1.418	2.928	-1.076
4.266	1.707	4.364	-1.260
5.707	1.922	5.799	-1.387
7.151	2.074	7.232	-1.470
8.598	2.172	8.665	-1.513
10.045	2.224	10.094	-1.519
11.490	2.224	11.524	-1.487
12.937	2.181	12.954	-1.424
14.381	2.097	14.386	-1.332
15.828	1.976	15.816	-1.214
17.272	1.827	17.249	-1.079
18.713	1.654	18.598	-.932
20.157	1.456	20.117	-.774
21.598	1.243	21.552	-.621
23.042	1.015	22.985	-.478
24.481	.768	24.423	-.354
25.910	.518	25.870	-.236
27.337	.262	27.320	-.121
28.767	0	28.767	0

Wing Cove

X_L	Y_L
17.512	-1.056
17.637	-1.028
17.758	-.990
17.876	-.941
17.989	-.882
18.097	-.814
18.198	-.736
18.292	-.650
18.378	-.556
18.455	-.455
18.646	-.156
18.789	.030
18.948	.204
19.121	.362
19.308	.506
19.506	.632
19.715	.740
19.932	.830
20.156	.901
20.386	.952
20.619	.983
20.854	.993
20.993	.988
21.906	1.034
22.818	1.080
23.730	.850

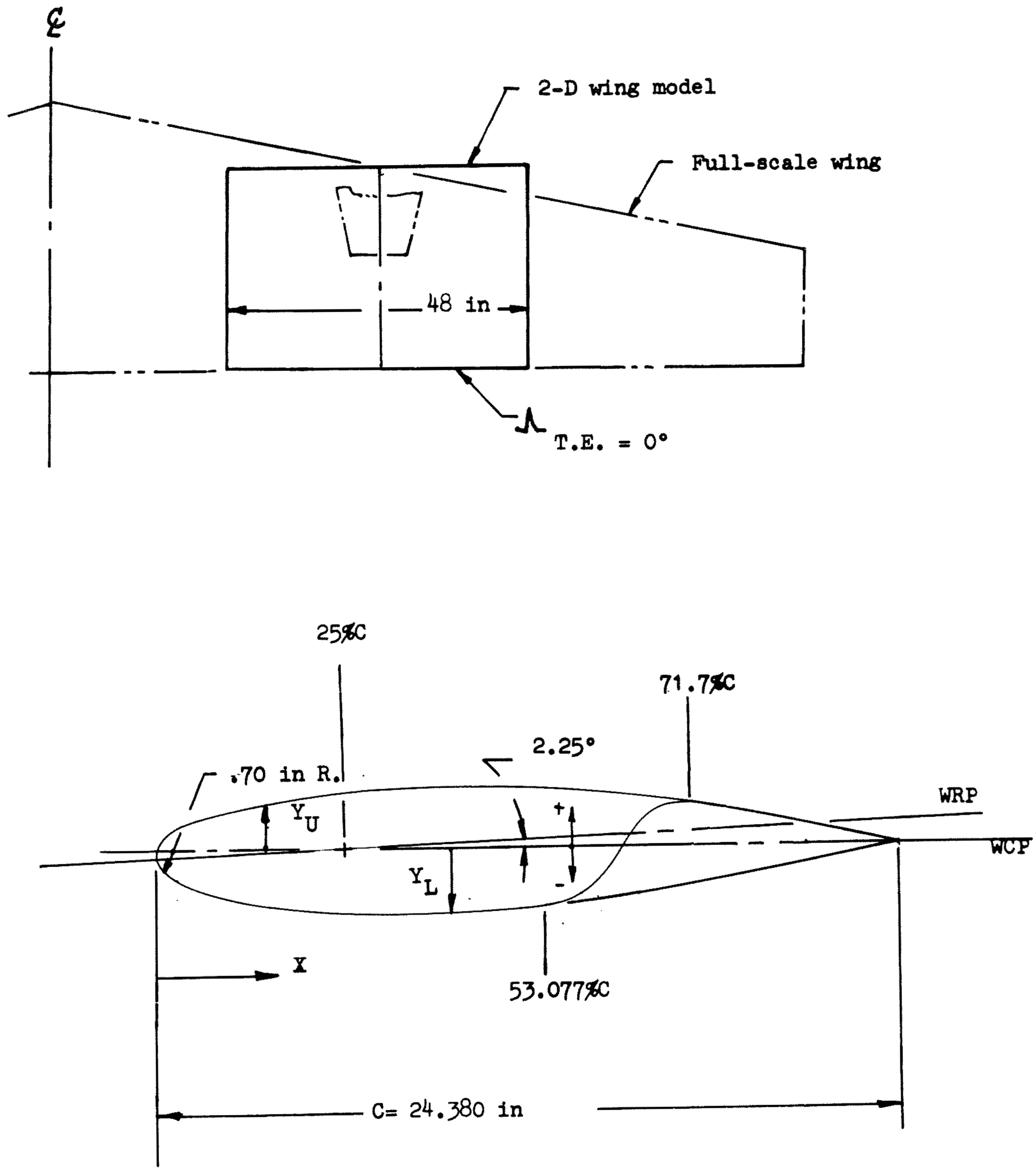
All dimensions are in inches for one-fifth-scale model.

TABLE B-I.- WING AND WING COVE COORDINATES, BASELINE A.

Flap 1			Flap 2			Flap 3		
X	Y_U	Y_L	X	Y_U	Y_U	X	Y_U	Y_L
0	.038	.038	0	.050	.050	0	0	0
.022	.134	-.058	.029	.182	-.075	.032	.129	-.084
.043	.171	-.088	.058	.231	-.116	.065	.158	-.102
.065	.203	-.111	.086	.274	-.147	.097	.189	-.112
.108	.257	-.142	.144	.343	-.190	.162	.237	-.140
.216	.354	-.191	.288	.471	-.259	.324	.329	-.180
.431	.473	-.230	.575	.642	-.298	.647	.456	-.211
.647	.554	-.236	.863	.744	-.271	.971	.542	-.217
.863	.610	-.222	1.151	.809	-.203	1.294	.603	-.210
1.079	.649	-.183	1.438	.857	-.111	1.618	.643	-.196
1.294	.679	-.127	1.726	.886	-.011	1.958	.666	-.181
1.510	.689	-.073	2.013	.888	.072	2.265	.674	-.165
1.726	.682	-.021	2.301	.868	.137	2.589	.668	-.150
1.942	.659	.030	2.589	.832	.186	2.912	.651	-.136
2.157	.624	.071	2.876	.780	.218	3.236	.625	-.121
2.373	.579	.089	3.164	.717	.230	3.560	.593	-.106
2.589	.527	.094	3.452	.645	.228	3.883	.553	-.091
2.805	.471	.090	3.739	.568	.214	4.207	.507	-.076
3.020	.412	.079	4.027	.489	.191	4.530	.455	-.063
3.236	.352	.066	4.315	.410	.163	4.854	.396	-.051
3.452	.288	.051	4.602	.330	.130	5.178	.331	-.040
3.667	.220	.035	4.890	.247	.092	5.501	.260	-.030
3.883	.148	.014	5.178	.165	.050	5.825	.183	-.022
4.099	.075	-.011	5.465	.083	.005	6.148	.100	-.015
4.315	.003	-.029	5.753	.003	-.041	6.472	0	0

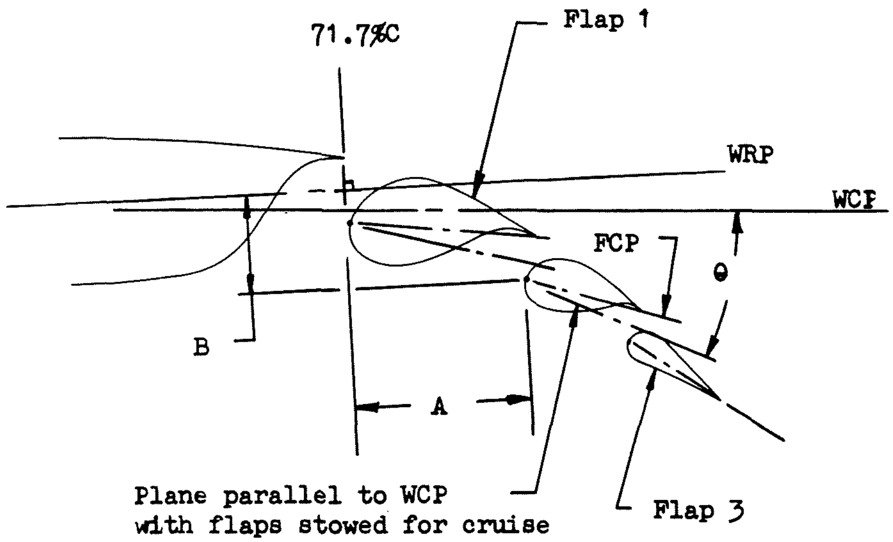
All dimensions are in inches for one-fifth-scale model.

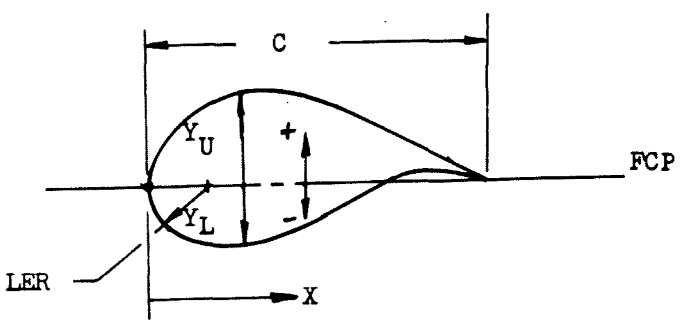
TABLE B-II.- FLAP COORDINATES, BASELINE A.



All dimensions are for one-fifth-scale model.

Figure B-3.- Wing geometry, baseline B.





	Takeoff			Landing		
	Flap 1	Flap 2	Flap 3	Flap 1	Flap 2	Flap 3
θ, deg	18	28	33	38	55	65
A; in	0	4.915	7.741	.115	4.220	5.900
B, in	1.110	2.780	4.620	.688	4.736	7.665
LER, in	.615	.860	.335	.615	.860	.335
C, in	5.375	3.455	3.080	5.375	3.455	3.080
All dimensions are for one-fifth-scale model.						

Figure B-4.- Flap geometry, baseline B.

Wing			Wing Cove	
X	Y_U	Y_L	X	Y_L
0	0	0		
.610	.765	-.855	12.940	-1.820
1.219	1.010	-1.065	13.165	-1.785
1.829	1.185	-1.390	13.653	-1.590
2.438	1.340	-1.555	14.140	-1.295
3.657	1.565	-1.790	14.628	-.850
4.876	1.750	-1.945	15.116	-.235
7.314	1.980	-2.085	15.603	+.570
9.752	2.055	-2.065	16.091	+1.105
12.190	2.010	-1.900	16.335	+1.260
14.628	1.828	-1.618	16.578	+1.355
17.066	1.515	-1.240	16.822	+1.415
19.504	1.100	-.800	17.066	+1.435
21.942	.575	-.350	17.310	+1.430
23.161	.295	-.160	17.480	+1.415
24.380	.020	-.020		

All dimensions are in inches for one-fifth-scale model.

TABLE B-III.- WING AND WING COVE COORDINATES, BASELINE B.

Flap 1			Flap 2			Flap 3		
X	Y_U	Y_L	X	Y_U	Y_L	X	Y_U	Y_L
0	0	0	0	0	0	0	0	0
.134	.515	-.455	.086	.320	-.320	.077	.285	-.205
.269	.715	-.625	.173	.485	-.425	.154	.380	-.280
.403	.873	-.740	.259	.588	-.495	.231	.455	-.308
.538	1.002	-.825	.346	.660	-.525	.308	.505	-.322
.806	1.218	-.940	.518	.770	-.580	.462	.555	-.315
1.075	1.378	-.980	.691	.845	-.603	.616	.575	-.290
1.613	1.534	-.930	1.037	.908	-.606	.924	.545	-.245
2.150	1.510	-.770	1.382	.895	-.540	1.232	.485	-.200
2.688	1.365	-.543	1.728	.813	-.440	1.540	.405	-.160
3.225	1.135	-.270	2.073	.695	-.300	1.848	.325	-.125
3.763	.875	+.035	2.419	.542	-.128	2.156	.245	-.095
4.300	.605	+.215	2.764	.370	+.080	2.464	.165	-.070
4.838	.315	+.195	3.110	.200	+.135	2.772	.095	-.035
5.106	.172	+.103	3.282	.105	+.055	2.926	.055	-.025
5.375	.020	-.020	3.455	.020	-.020	3.080	.020	-.020

All dimensions are in inches for one-fifth-scale model.

TABLE B-IV.- FLAP COORDINATES, BASELINE B.

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APPENDIX C

NOMENCLATURE

Symbols

c	wing chord length, cm
C_D	nozzle discharge coefficient, W_{meas}/W_{ideal}
C_L	lift coefficient, L/q_oS
C_p	surface static pressure coefficient, $(p - p_\infty)/q$
C_T	gross thrust coefficient, F_E/q_oS
C_v	nozzle velocity or thrust coefficient, F_{meas}/F_{ideal}, where F_{ideal} is based on W_{meas}
C_X	thrust-minus-drag coefficient, F_X/q_oS
D	drag in flight direction, applicable to airplane or wind tunnel test, N
D	wing/flap reaction force parallel to WRP, applicable to static test, N
D	nozzle exit internal diameter, cm
F	thrust at nozzle exit or flap blowing slot, N
F/L	takeoff field length, m
F_E	nozzle gross thrust, N
F_{slot}	thrust at flap blowing slot, N
F_X	accelerating force, thrust minus drag, F_E-D, N
L	lift normal to flight direction, applicable to airplane or wind tunnel test, N
L	reaction force normal to WRP, applicable to static test, N
noy	unit of perceived noisiness
p	surface static pressure, N/m^2
p_∞	freestream static pressure, N/m^2
q, q_o	wind tunnel or freestream dynamic pressure, $\frac{1}{2} \rho V_o^2$, N/m^2
R	radius from noise source to microphone, m
rayl	unit of flow resistivity, $N\text{-}s/m^3$
S	wing area, m^2
V	local velocity in wake, m/s
V_j	mean nozzle exit velocity, m/s
V_{rel}	relative velocity between jet and freestream, $V_j - V_w$, m/s
V_{slot}	mean velocity at flap blowing slot, m/s

V_w, V_o	wind tunnel, freestream, or airplane velocity, m/s
W	airflow, kg/s
W_{meas}	measured airflow, kg/s
W_{ideal}	ideal airflow based on measured total pressure, kg/s
α	angle of attack between WRP and flight direction, rad; nose up is positive
δ_F	third-flap deflection angle, rad
δ_{FV}	thrust vector (or turning) angle; angle in lift-drag plane through which jet is turned, relative to WRP, as measured statically, rad
Δ	incremental change of parameter
η_T	turning efficiency; ratio of momentum of turned exhaust stream, in the lift-drag plane, to nozzle exit momentum, as measured statically, %
θ	azimuth angle from nose of aircraft, rad
Λ	sweep angle of wing T.E., rad
ϕ	elevation angle from source to observer in nozzle exit plane, rad

Abbreviations

B/L	baseline
BPR	bypass ratio
dB	decibel, referred to 0.0002 dyne/cm^2
DOC	direct operating cost, cents/available seat statute mile
EBF	externally blown flap
EFG	enlarged gap between second and third flaps
EPNdB	effective perceived noise decibel
Exp.	exponent
FOM	figure of merit, noise reduction achievable by reoptimization of modified reference aircraft, PNdB
frg.	fairing
L.E.	leading edge
L/S	lower surface
LSWT	Lockheed-Georgia low-speed wind tunnel
MNHE	24-lobe mixer nozzle with hard (untreated) ejector shroud
MNTE	24-lobe mixer nozzle with treated ejector shroud
NPR	nozzle pressure ratio referred to ambient pressure

OAFPL	overall fluctuating pressure level, dB
OASPL	overall sound pressure level, dB
OWE	airplane operating weight empty, kg
PNdB	perceived noise decibel
PNL	perceived noise level, PNdB
PNLM	maximum perceived noise level, PNdB
PNLT	tone-corrected perceived noise level, PNdB
PCM	pulse code modulation
P.P., PP	perforated plate
RFG	reduced gap between second and third flaps
SFG	standard gap between second and third flaps
SPL	sound pressure level, dB
SSF	single-slotted flap
TCF	tone correction factor
T.E., TE	trailing edge
TSF	triple-slotted flap
U/S	upper surface
USF	unslotted flap
WRP	wing reference plane

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